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Polypeptide	Amino acid sequence	SEQ ID NO:
Z _{wt}	VDNKFNKEQQ NAFYEILHLP NLNEEQRNAF IQSLKDDPSQ SANLLEAEKK LNDQAQPK	1
Z HER2 A	VDNKFNKELR QAYWEIQALP NLNWTOOSRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	2
Z HER2 B	VDNKFNKEPK TAYWEIVKLP NLNPEQRRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	3
Z HER2 C	VDNKFNKEPR EAYWEIQRLP NLNNKQKAFF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	4
Z HER2 D	VDNKFNKEWV QAGSEIYNLPLNRAQMRAF IRSLSDDPSQ SANLLEAEKK LNDQAQPK	5
Z HER2:101	VDNKFNKEMR HAYWEIVKLP NLNPROKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	6
Z HER2:102	VDNKFNKEMR KAYWEIVLPLNRRQSRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	7
Z HER2:103	VDNKFNKEMR HAYWEIATLPLNNVQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	8
Z HER2:104	VDNKFNKEER TAYWEIVLPLNPGQIRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	9
Z HER2:105	VDNKFNKELR TAYWEIVLPLNWTQIRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	10
Z HER2:106	VDNKFNKEPR KAYWEIAVLPNLPAQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	11
Z HER2:107	VDNKFNKEMR NAYWEIALLPLNNMQQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	12
Z HER2:108	VDNKFNKELR TAYWEIVGLPNHTQVRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	13
Z HER2:109	VDNKFNKELR TAYWEIVLPLNREQIRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	14
Z HER2:110	VDNKFNKEER NAYWEIALLPLNNMQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	15
Z HER2:112	VDNKFNKEER KAYWEIVVLPNLNRQIRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	16
Z HER2:113	VDNKFNKEER TAYWEIVLPLNREOGRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	17
Z HER2:114	VDNKFNKEER TAYWEIATLPLNNKQIRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	18
Z HER2:115	VDNKFNKEER NAYWEIVVLPNLNRQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	19
Z HER2:116	VDNKFNKEER NAYWEIAKLPNLNGQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	20
Z HER2:118	VDNKFNKEER QAYWEIALLPLNHSQTRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	21
Z HER2:120	VDNKFNKEER HAYWEIVVLPNLNLQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	22
Z HER2:121	VDNKFNKELR TAYWEIVGLPNRSQSRRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	23
Z HER2:122	VDNKFNKELR TAYWEIAGLPNLPKQKRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	24
Z HER2:123	VDNKFNKEER KAYWEITQLPNTRQIRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	25
Z HER2:124	VDNKFNKEER KAYWEIVLPLNWEQRNRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	26
Z HER2:125	VDNKFNKEER KAYWEITQLPNREQRNRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	27
Z HER2:126	VDNKFNKEER HAYWEIATLPLNTINQSRRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	28
Z HER2:127	VDNKFNKEMR NAYWEIVGLPNRWQSRRAF IRSLYDDPSQ SANLLEAEKK LNDQAQPK	29

FIGURE 1

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Polypeptide	Amino acid sequence	SEQ ID NO:
Z HER2:129	VDNKFNKELR NAYWEIVKLP NLNPWQHRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	30
Z HER2:130	VDNKENKEFR TAYWEIVKLP NLNVROSRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	31
Z HER2:133	VDNKFENKMR TAYWEIVKLP NLNDYQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	32
Z HER2:135	VDNKFENKEFR TAYWEITOLP NLNRLOSRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	33
Z HER2:137	VDNKFENKEIR TAYWEIAGLP NLNAQQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	34
Z HER2:138	VDNKFENKMR QAYWEIVRLP NLNAQOKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	35
Z HER2:139	VDNKFENKMR NAYWEIVTLP NLNKTOQSRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	36
Z HER2:140	VDNKFENKMR QAYWEIVKLP NLNPQGSRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	37
Z HER2:148	VDNKFENKMR TAYWEIVLILP NLNMWQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	38
Z HER2:153	VDNKFENKMR KAYWEIVALLP NLNKWQSRFAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	39
Z HER2:158	VDNKFENKMR KAYWEIVALLP NLNRWQIRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	40
Z HER2:159	VDNKFENKMR QAYWEIVLILP NLNRWQTRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	41
Z HER2:162	VDNKFENKELR KAYWEIVGLP NLNREQNRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	42
Z HER2:165	VDNKFENKMR TAYWEIVGLP NLNNQQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	43
Z HER2:167	VDNKFENKELR TAYWEIVRLP NLNWNOQTRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	44
Z HER2:168	VDNKFENKELR HAYWEIVRLP NLNAGQHRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	45
Z HER2:169	VDNKFENKELR KAYWEIVTLP NLNPSQHRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	46
Z HER2:170	VDNKFENKMR TAYWEIAKLP NLNPQQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	47
Z HER2:171	VDNKFENKLR TAYWEIVTLP NLNTSQTRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	48
Z HER2:172	VDNKFENKLR KAYWEIQVLP NLNVRQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	49
Z HER2:177	VDNKFENKPR QAYWEIVLILP NLNRFQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	50
Z HER2:178	VDNKENKEPR NAYWEIVGLP NLNQGQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	51
Z HER2:179	VDNKENKENR QAYWEIVRLP NLNNSQRRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	52
Z HER2:180	VDNKFENKMR NAYWEIVLILP NLNSAQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	53
Z HER2:205	VDNKFENKMR TAYWEIVLILP NLNKWQIRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	54
Z HER2:207	VDNKENKEMR NAYWEIVALLP NLNVAQKRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	55
Z HER2:209	VDNKENKEFR QAYWEIVKLP NLNSGQHRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	56
Z HER2:222	VDNKFENKMR TAYWEIVKLP NLNTAQNRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	57
Z HER2:223	VDNKENKELR TAYWEIVSLP NLNRMQSRFAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	58
Z HER2:225	VDNKFENKMR NAYWEIVKLP NLNPQGSRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	59
Z HER2:226	VDNKFENKMR NAYWEIVKLP NLNPWQHRAF IRSLYDDPSQ SANLLAEAKK LNDAQAKP	60

FIGURE 1

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Polypeptide	Amino acid sequence	SEQ ID NO:
Z HER2 : 227	VDNKENKEMR QAYWEIALLP NINRWQIRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	61
Z HER2 : 229	VDNKENKEFR TAYWEIAVLP NINNNQQKRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	62
Z HER2 : 230	VDNKENKECR TAYWEIVKLP NINNAQQKRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	63
Z HER2 : 232	VDNKENKEPK TAYWEIVVLP NINNSQQKRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	64
Z HER2 : 233	VDNKENKEMR NAYWEIVTLP NINKWQIRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	65
Z HER2 : 234	VDNKENKEMR KAYWEIATLP NINKSQSRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	66
Z HER2 : 235	VDNKENKEFR TAYWEIVTLP NINVGQTRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	67
Z HER2 : 236	VDNKENKELR TAYWEIVGLP NINTROSRRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	68
Z HER2 : 237	VDNKENKELR HAYWEIVQLP NINREQGRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	69
Z HER2 : 239	VDNKENKEFR HAYWEIIKLP NINGKQHRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	70
Z HER2 : 240	VDNKENKEMR TAYWEIVSLP NINTLQSRRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	71
Z HER2 : 261	VDNKENKEMR KAYWEIQGLP NINNNQQKRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	72
Z HER2 : 264	VDNKENKEMR NAYWEIAKLP NINREQKRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	73
Z HER2 : 265	VDNKENKEMR HAYWEIVGLP NINMIIQQRRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	74
Z HER2 : 271	VDNKENKELR NAYWEIVKLP NINRAQNRRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	75
Z HER2 : 278	VDNKENKELR TAYWEIIKLP NINNYQRRAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	76
Z HER2 : 0024*	VDNKENKEPR EAYWEIQRLP NINNMQQKTAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	77
Z HER2 : 0434	VDNKENKEMY AAYWEIIDLP NINTPQIHAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	78
Z HER2 : 3053	VDNKENKETR SAYWEIVNL P NINQGQRHAF IRSLYDDPSQ SANLLAEAKK LNDQAPK	79

FIGURE 1

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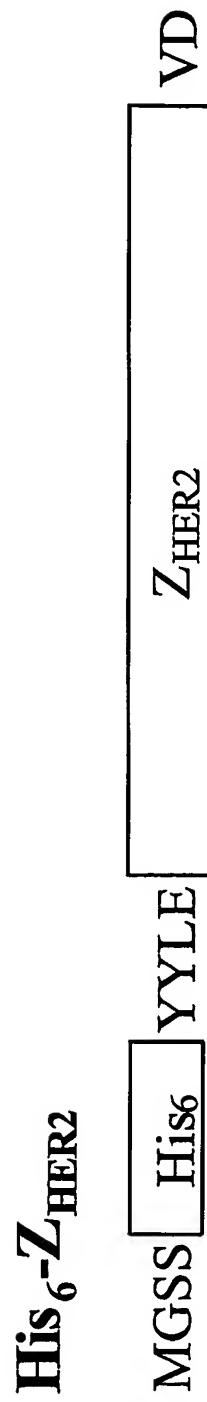
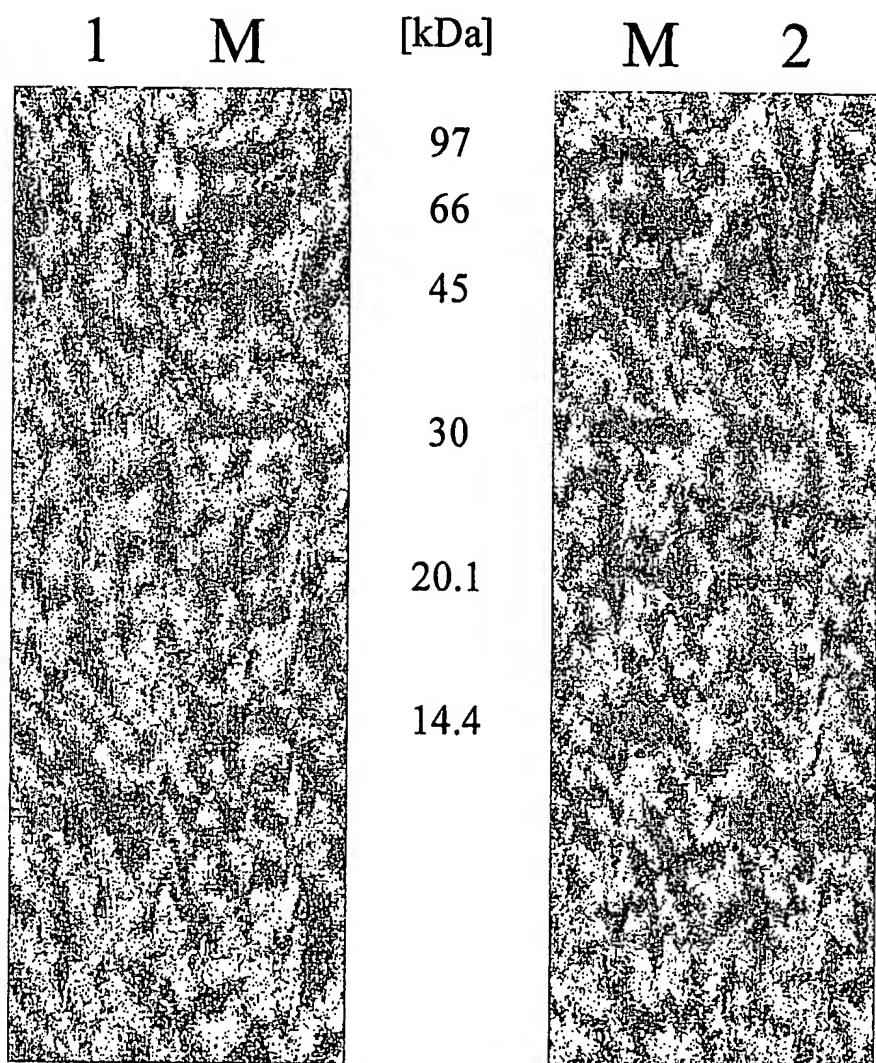


FIGURE 2

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**FIGURE 3**

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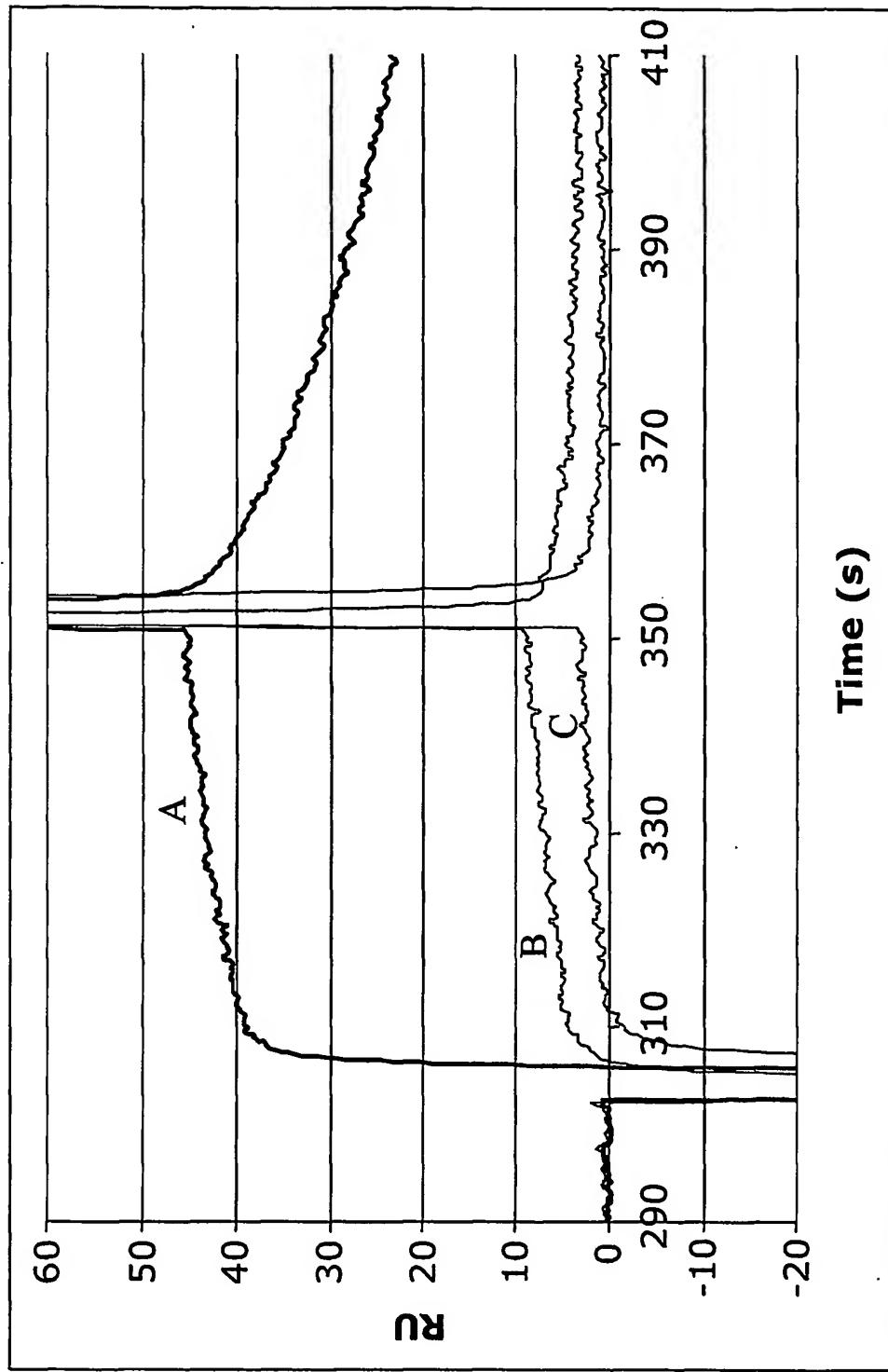


FIGURE 4

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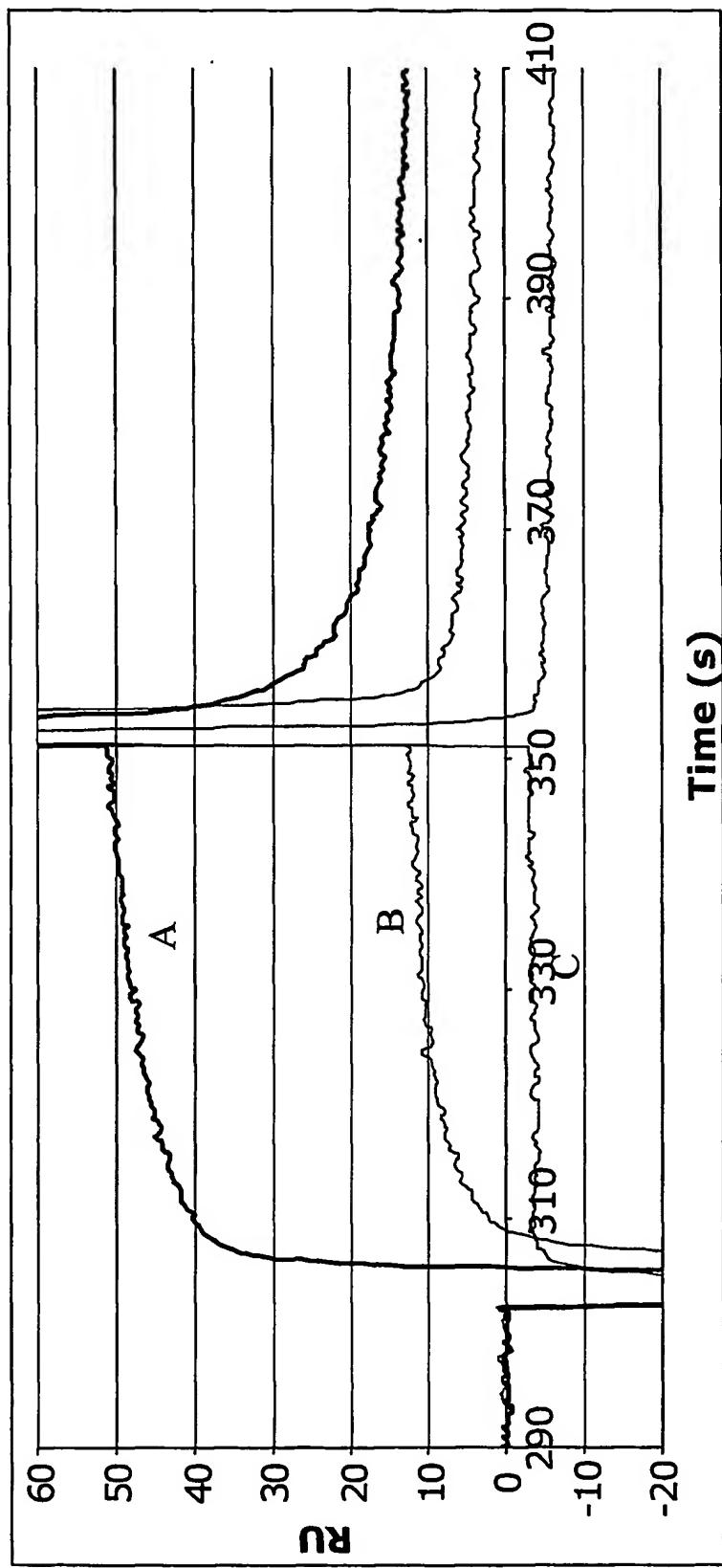


FIGURE 5

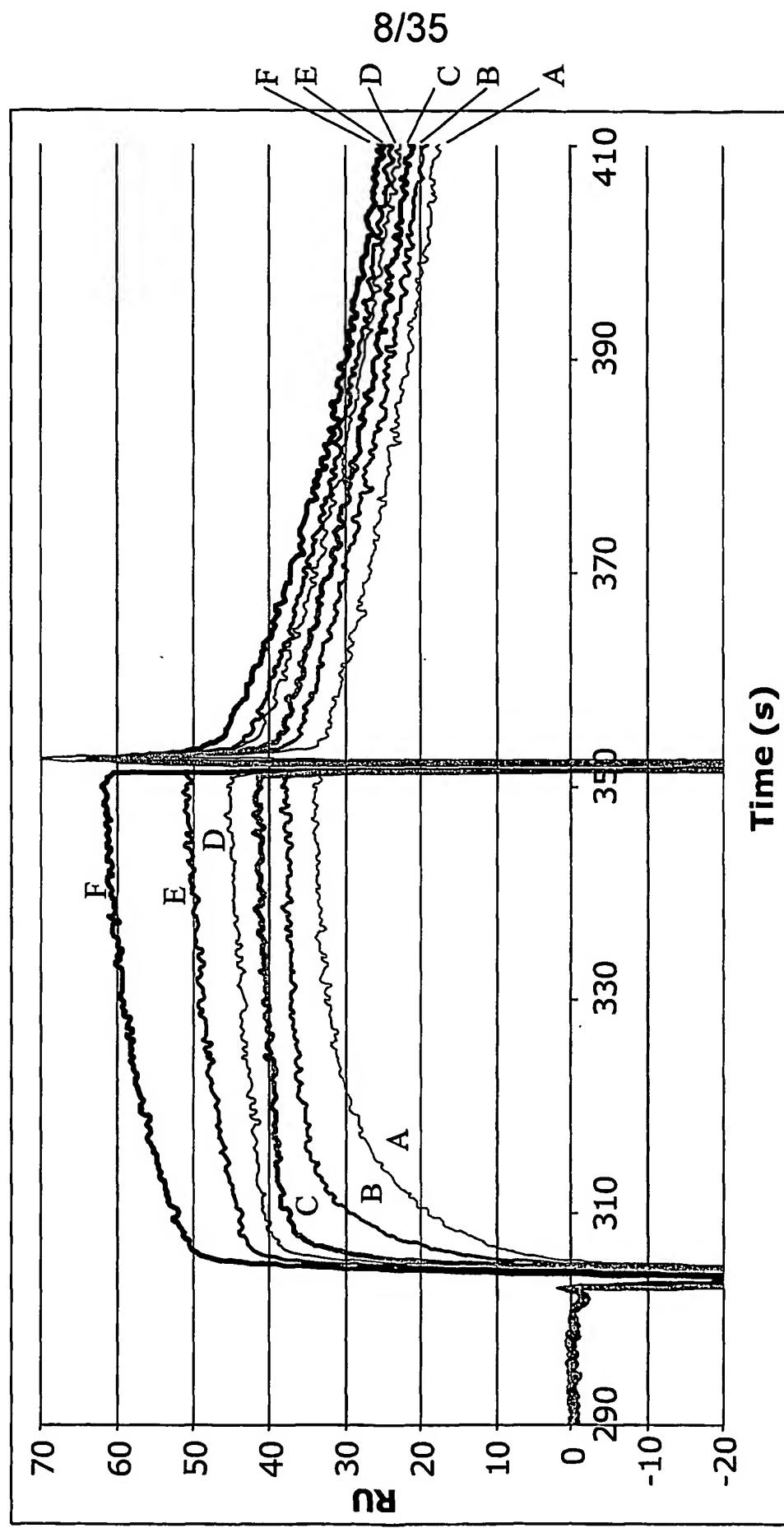


FIGURE 6

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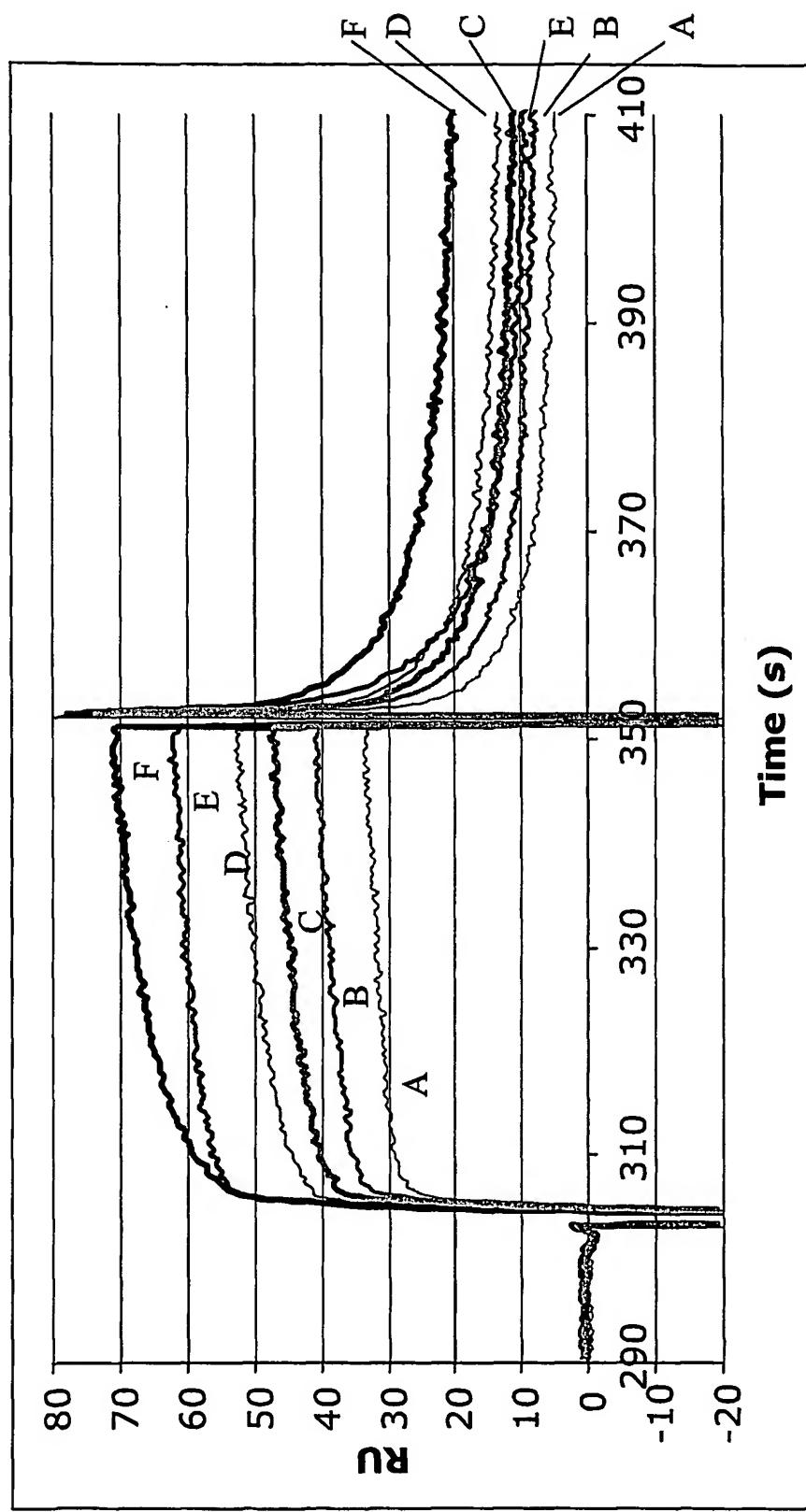


FIGURE 7

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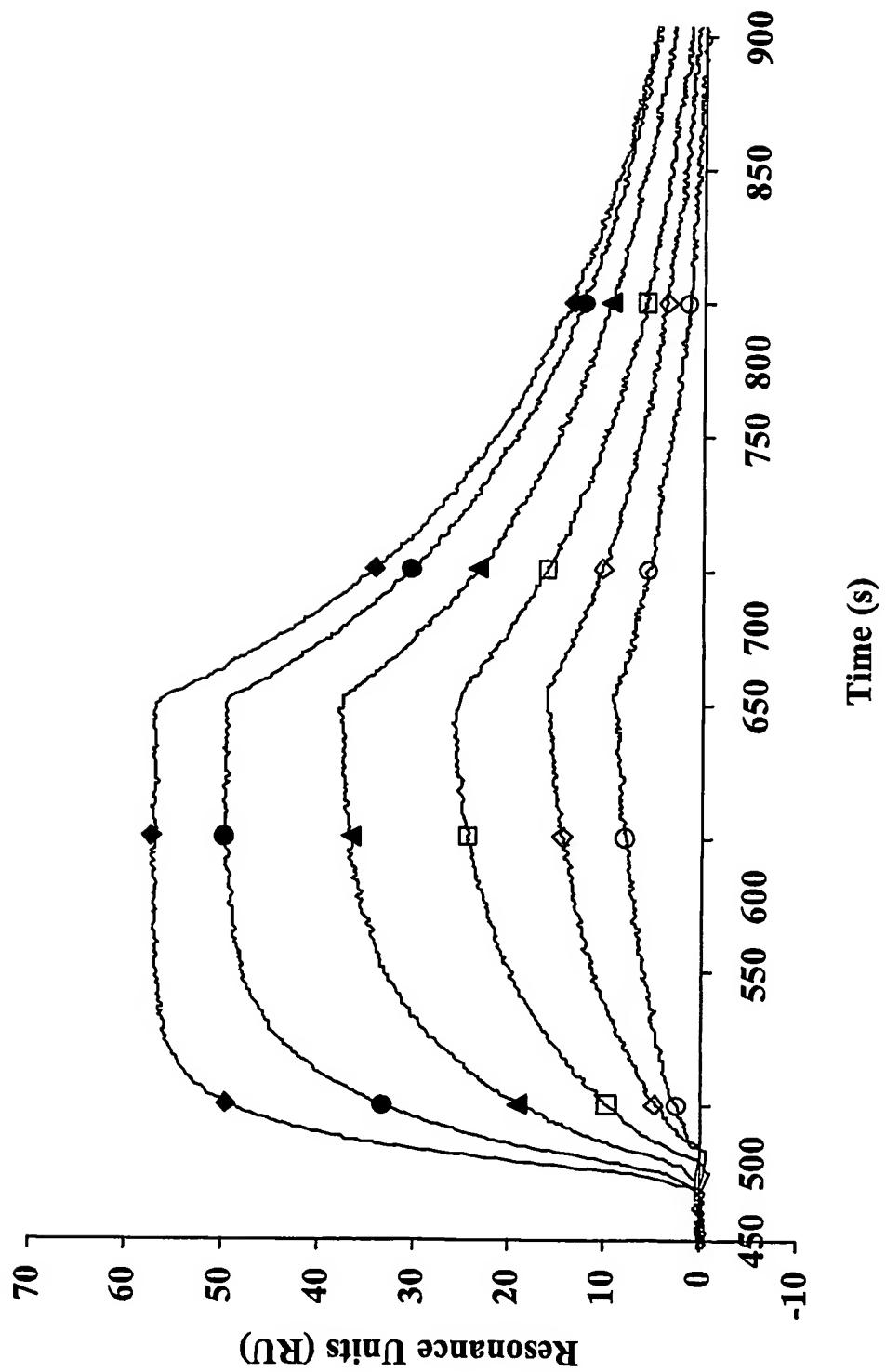


FIGURE 8A

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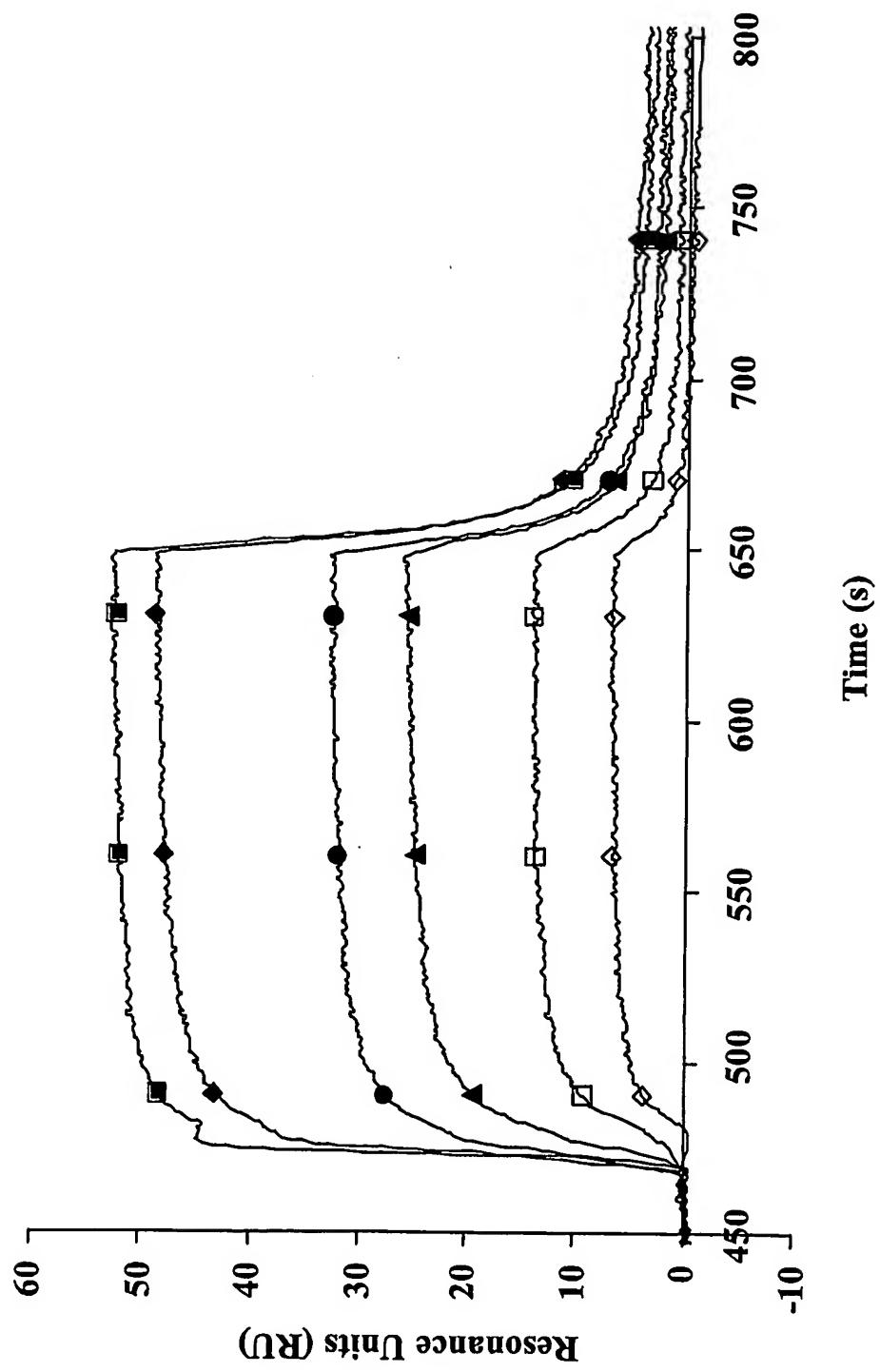


FIGURE 8B

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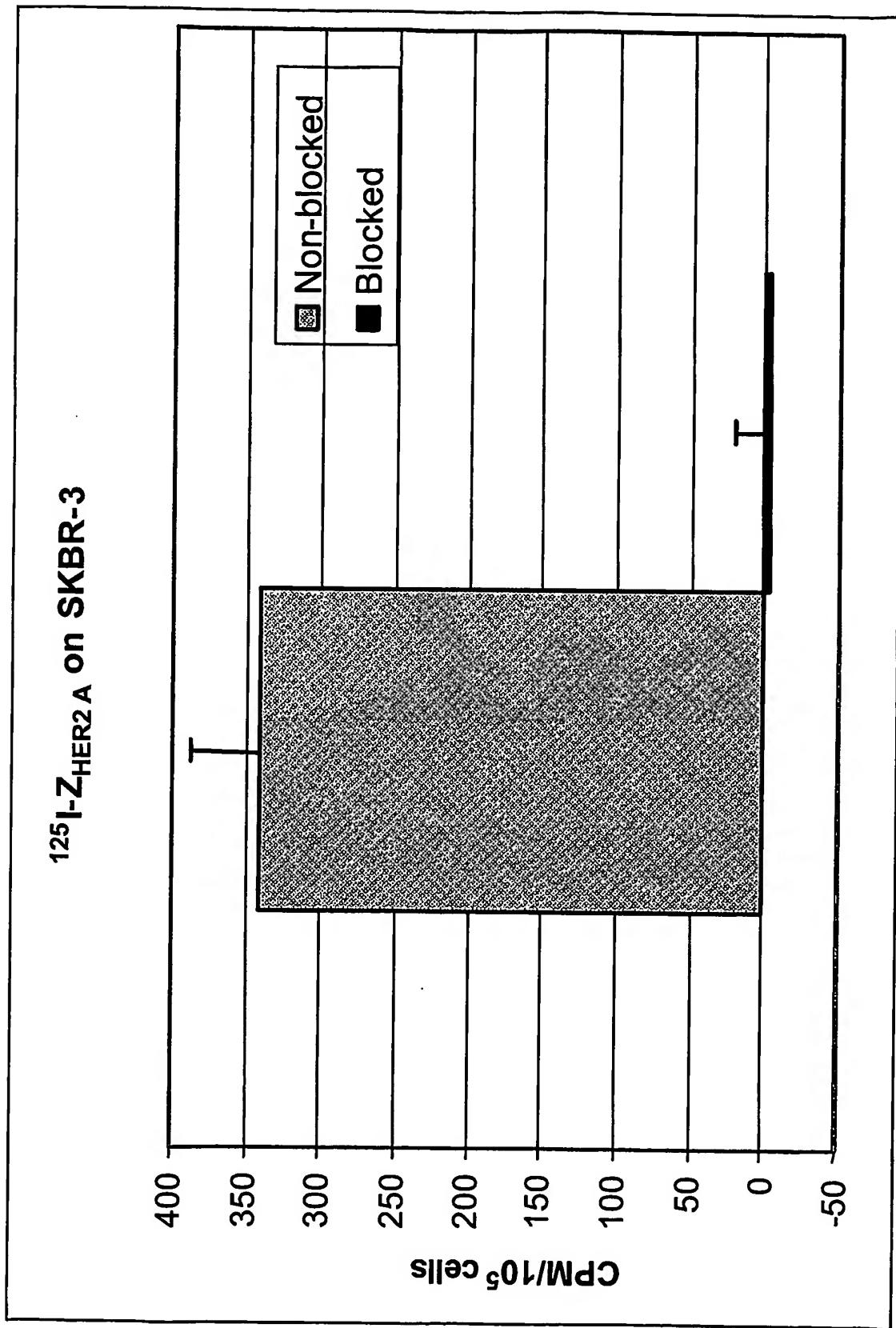


FIGURE 9

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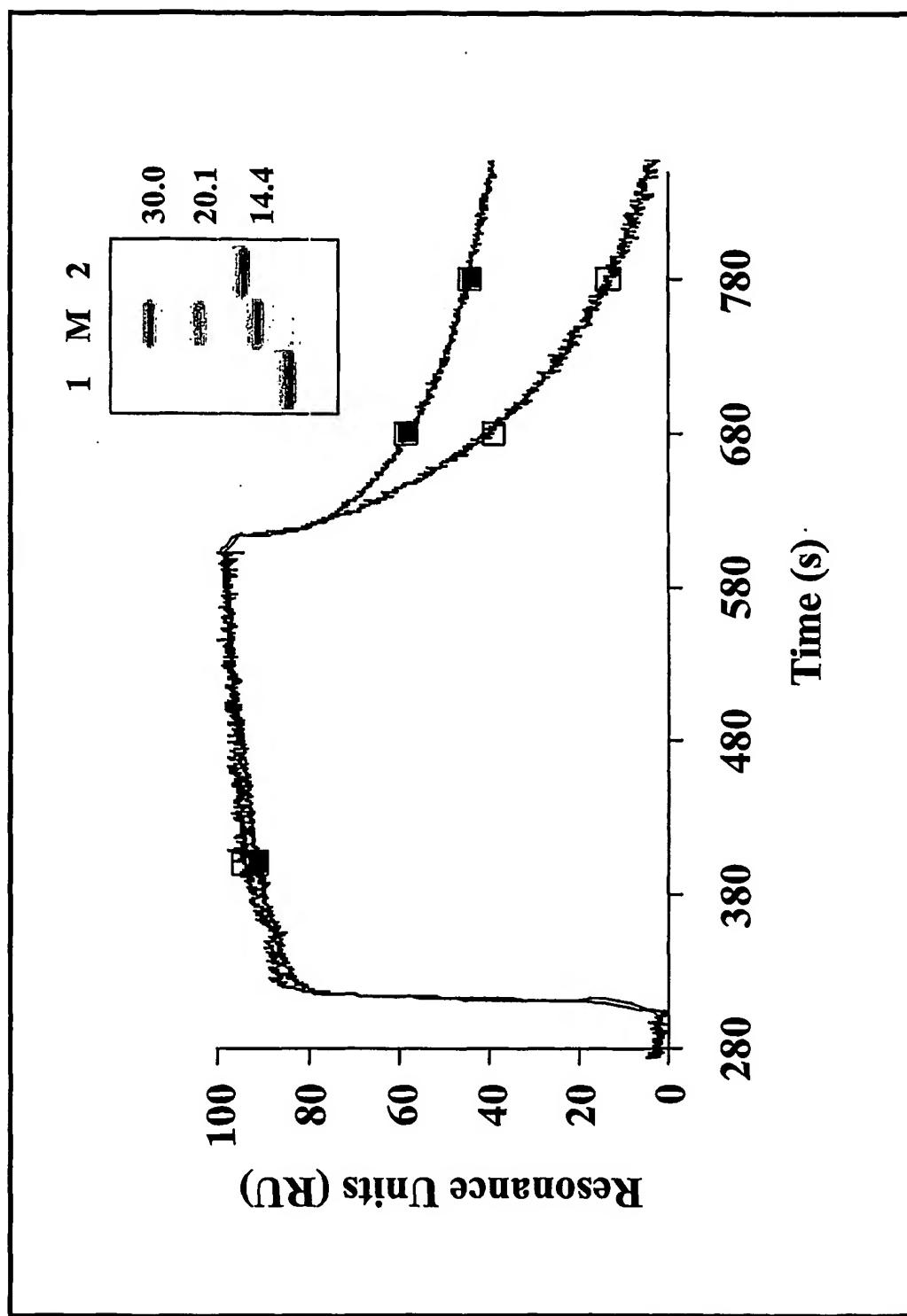


FIGURE 10

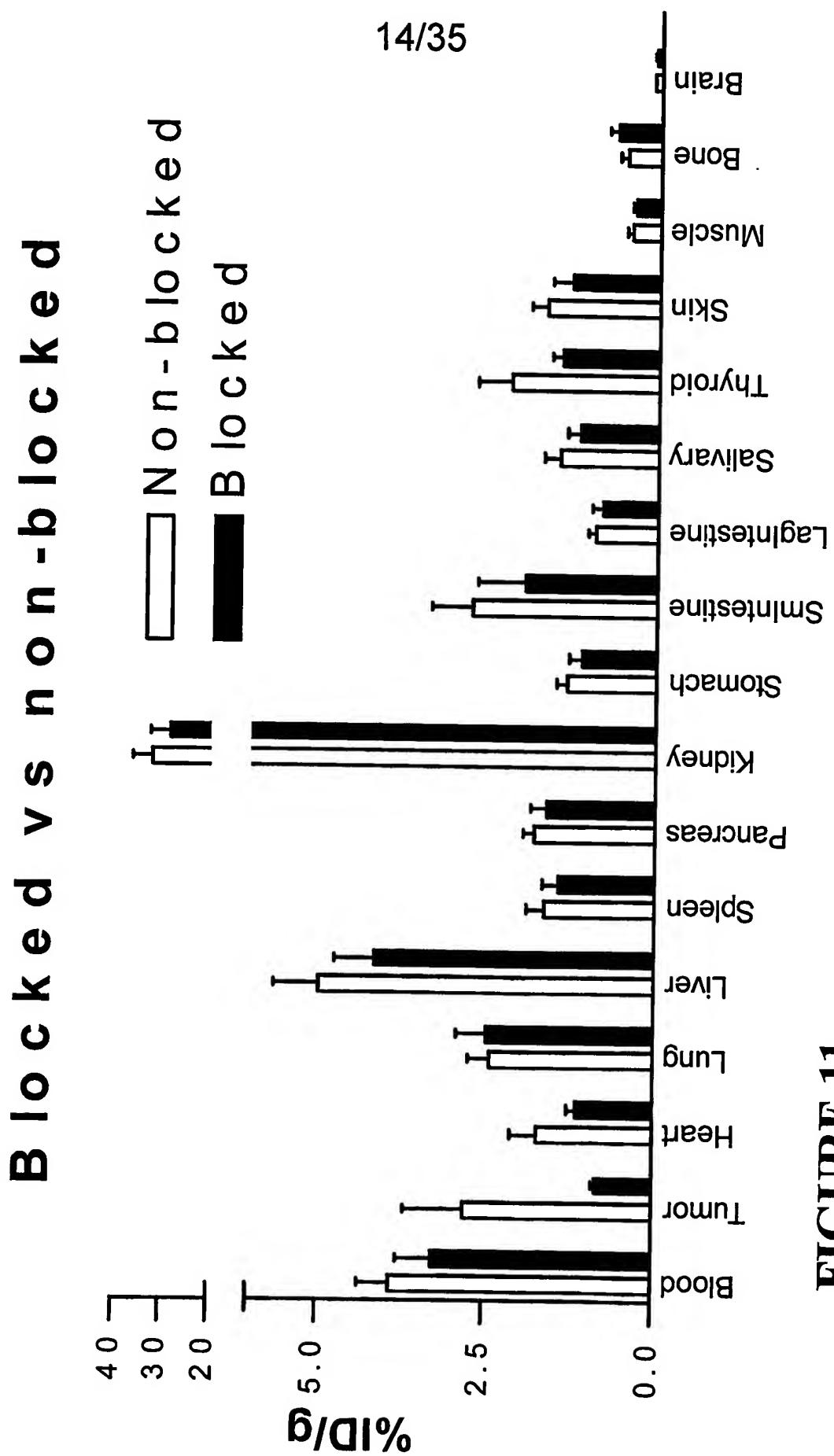


FIGURE 11

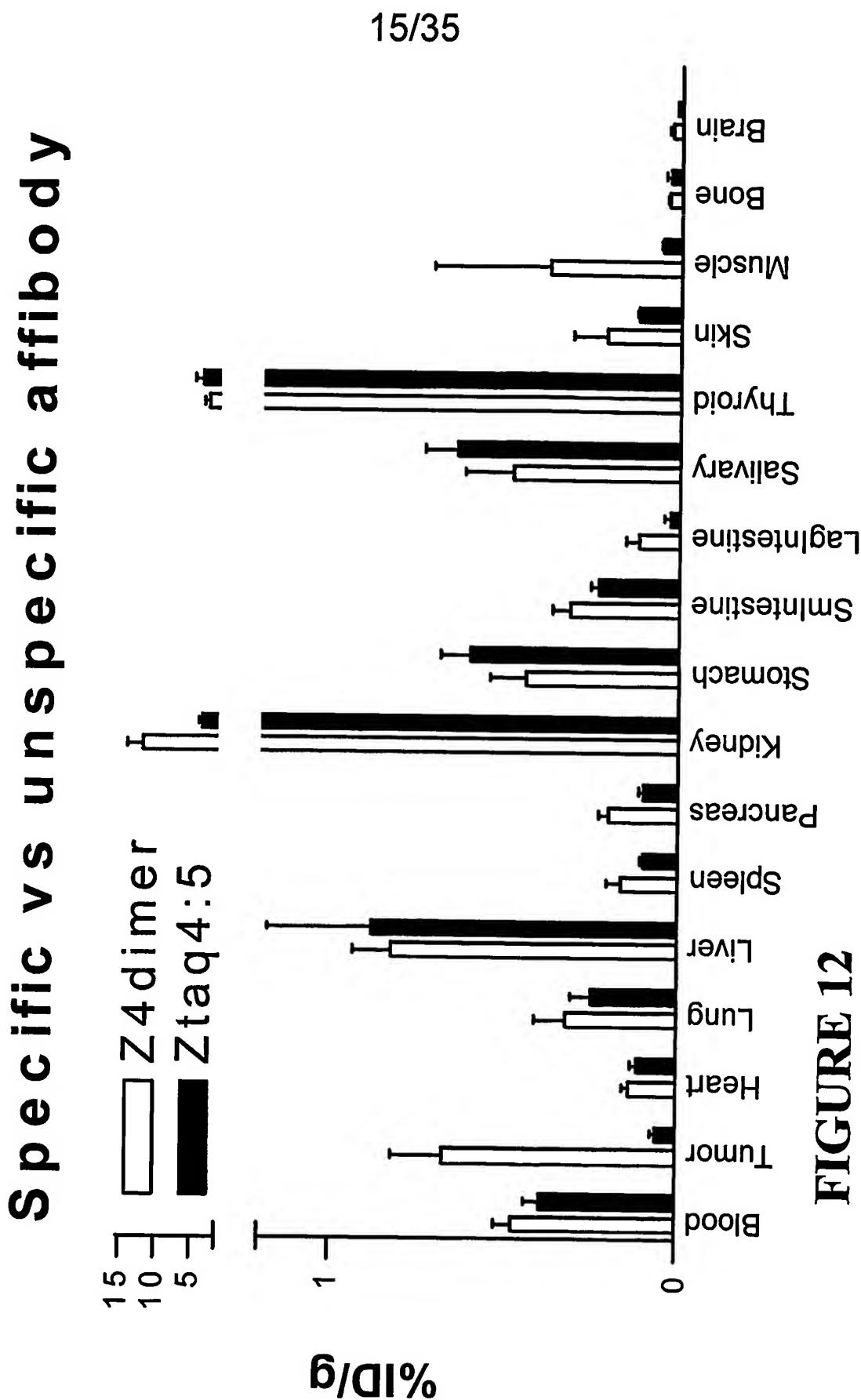


FIGURE 12

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Biodistribution, combined data

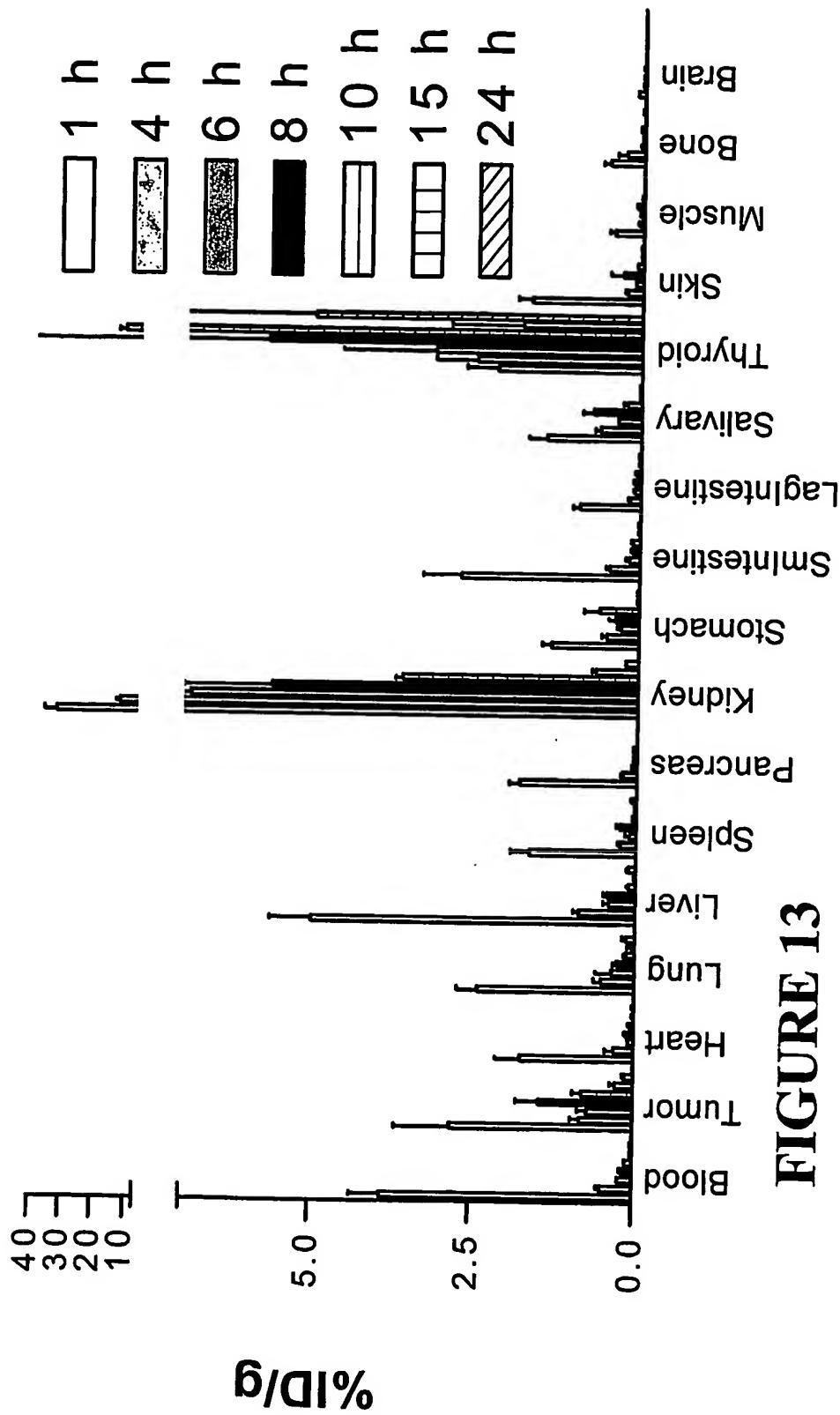
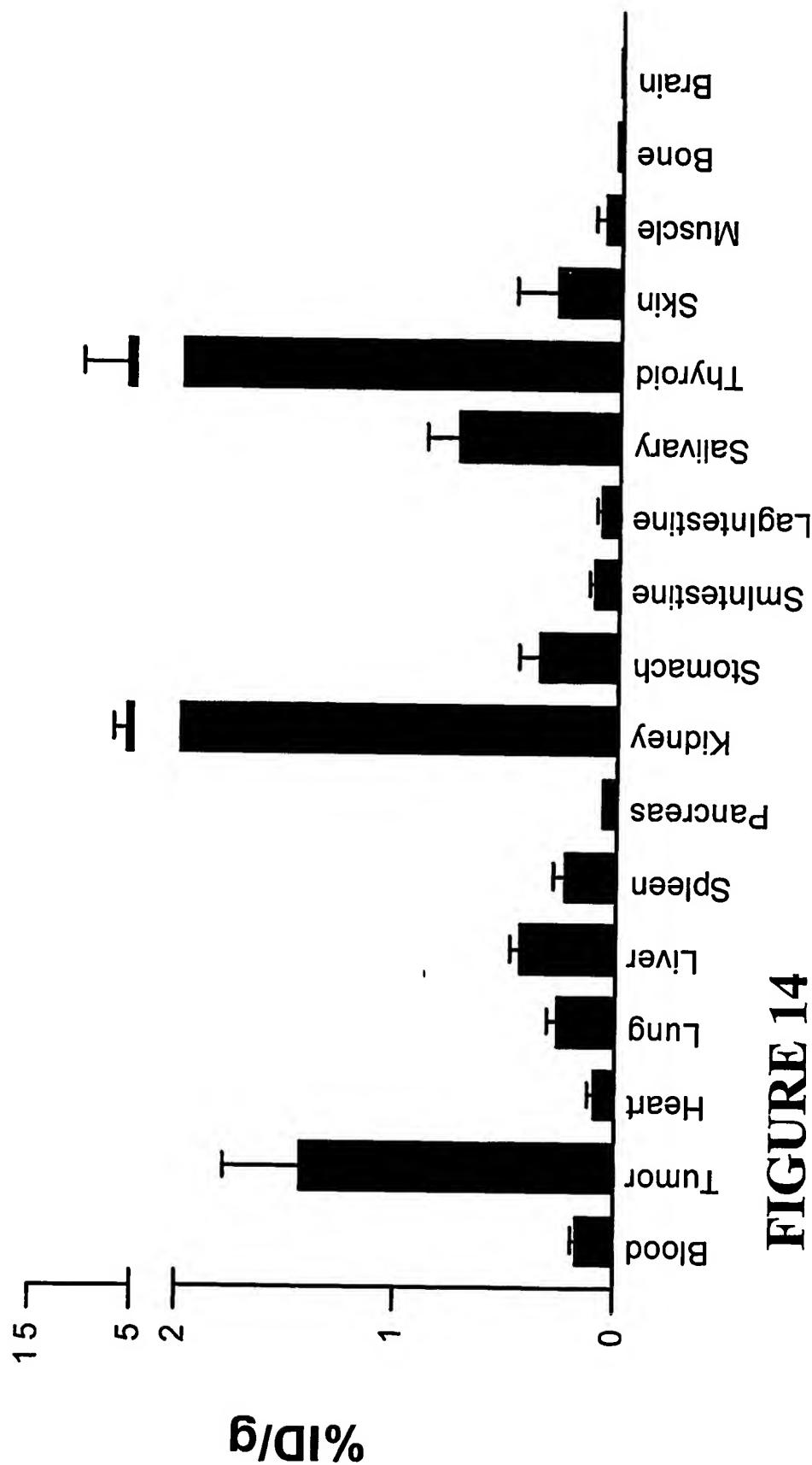
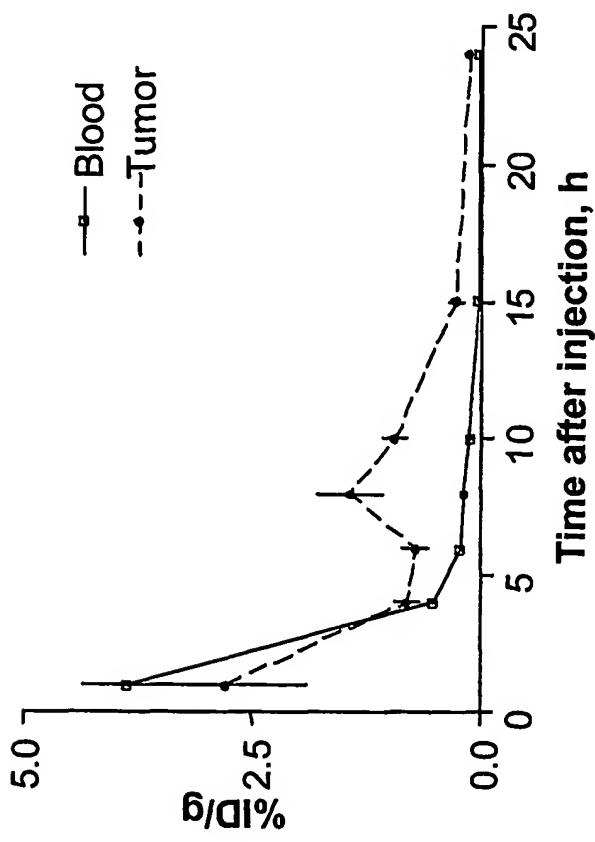


FIGURE 13

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Biodistribution at 8 h ip**FIGURE 14**

A: Blood and tumor, combined data



B: Blood and tumor, analysis

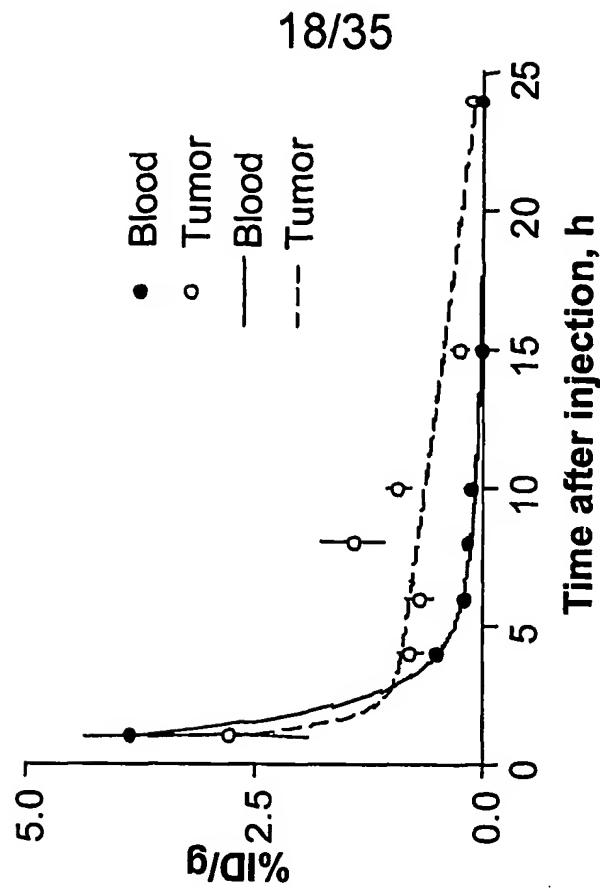
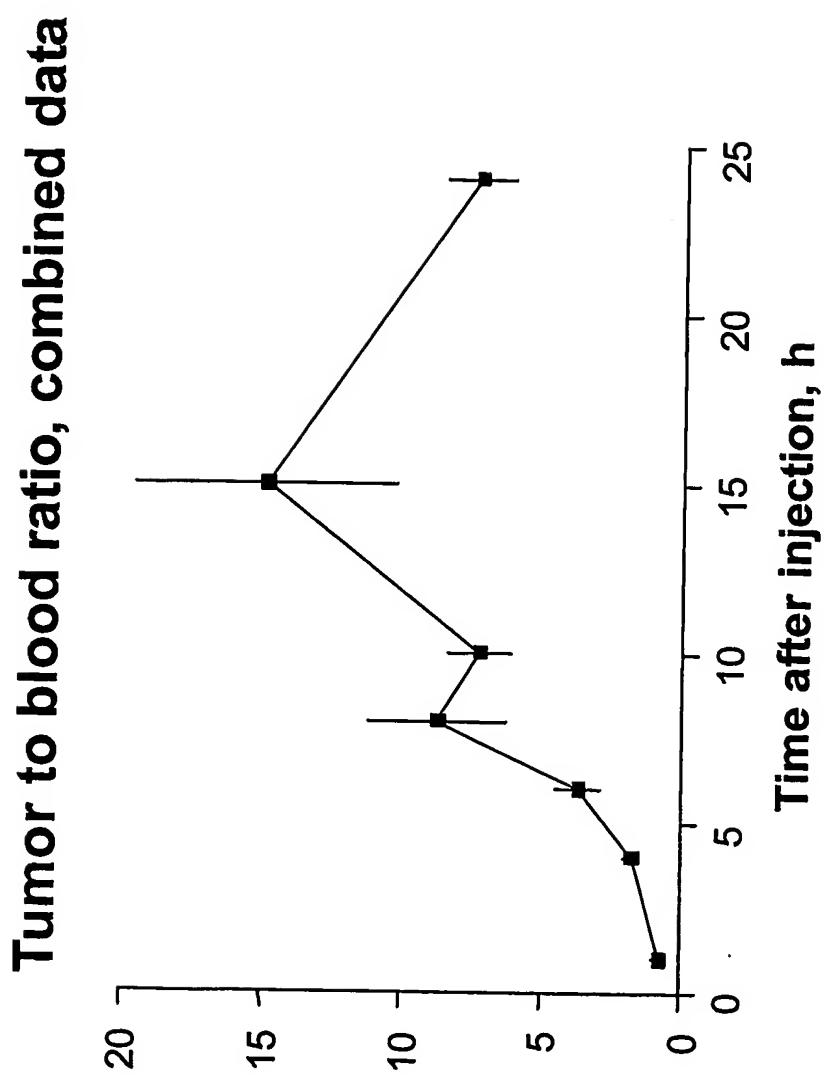
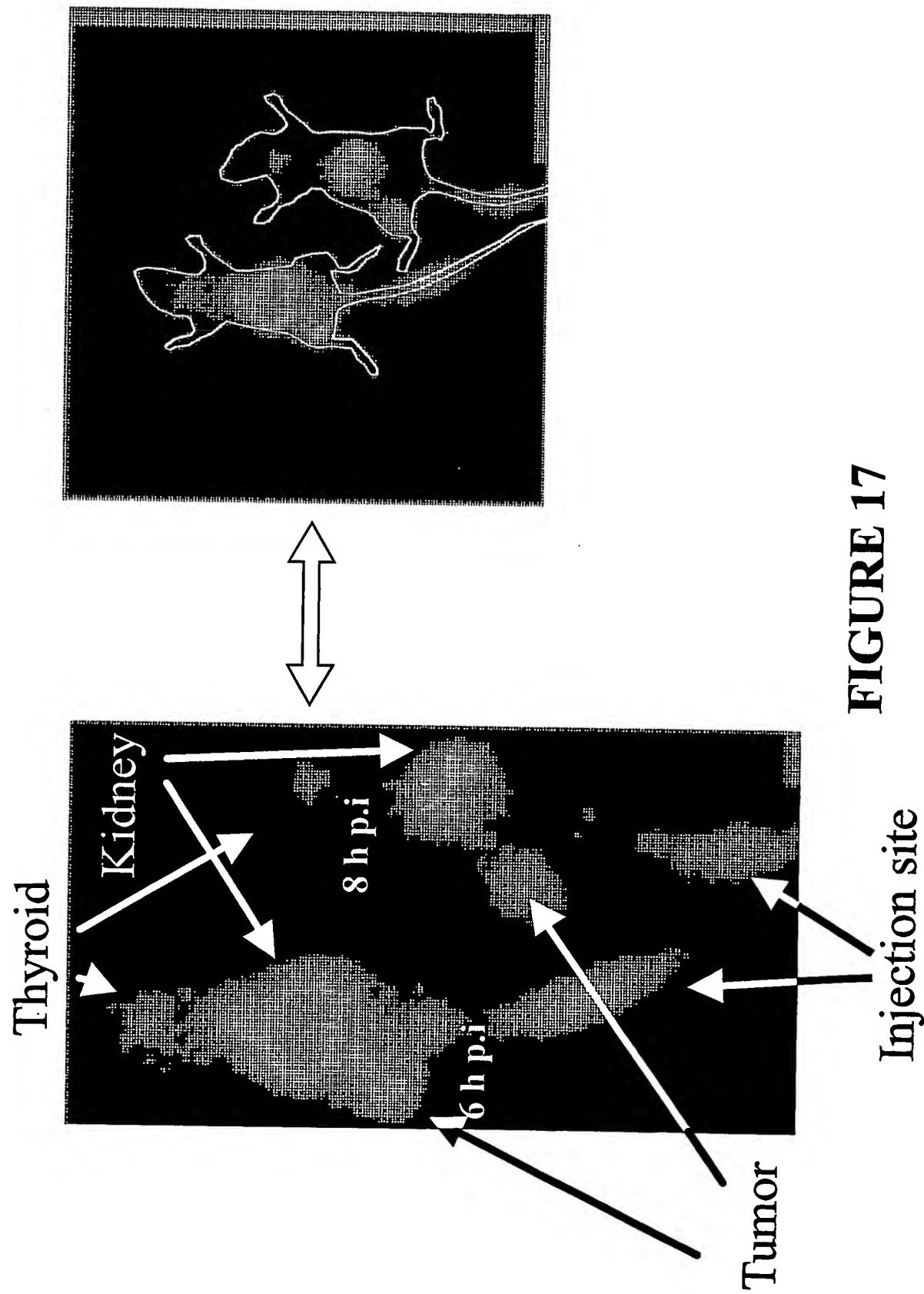


FIGURE 15

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**FIGURE 16**

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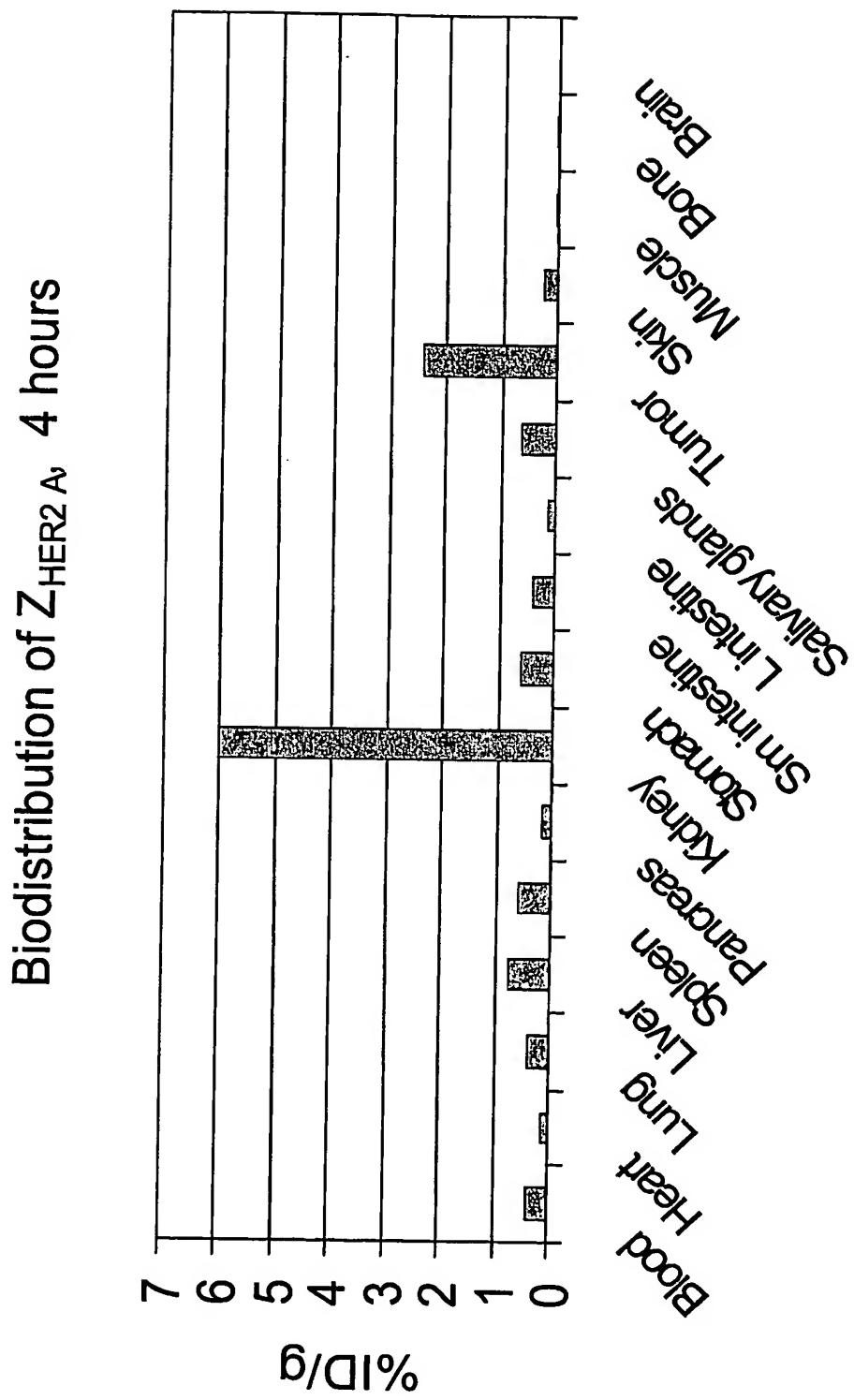


FIGURE 18

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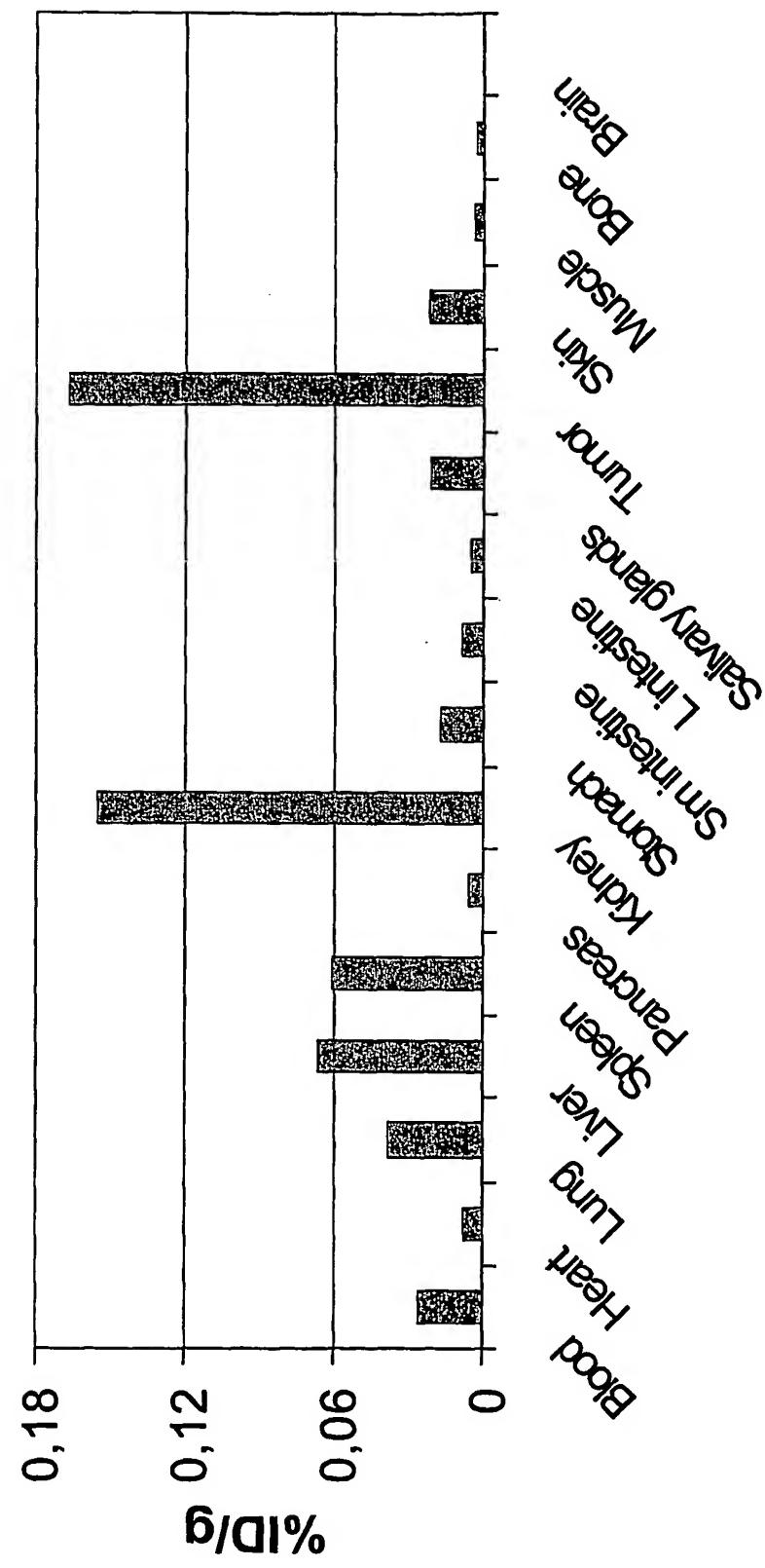
Biodistribution of Z_{HER2 A} 24 hours

FIGURE 19

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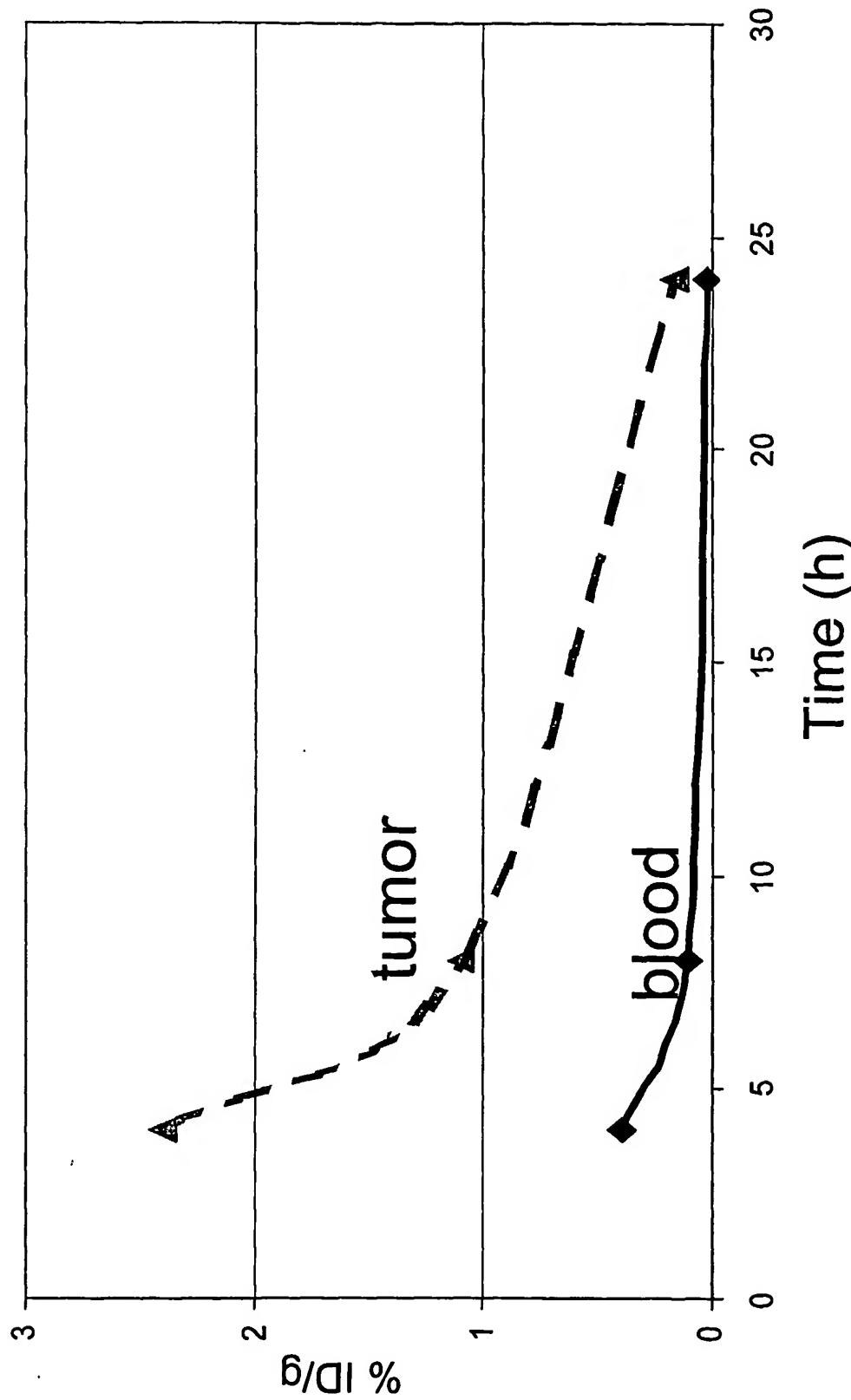


FIGURE 20

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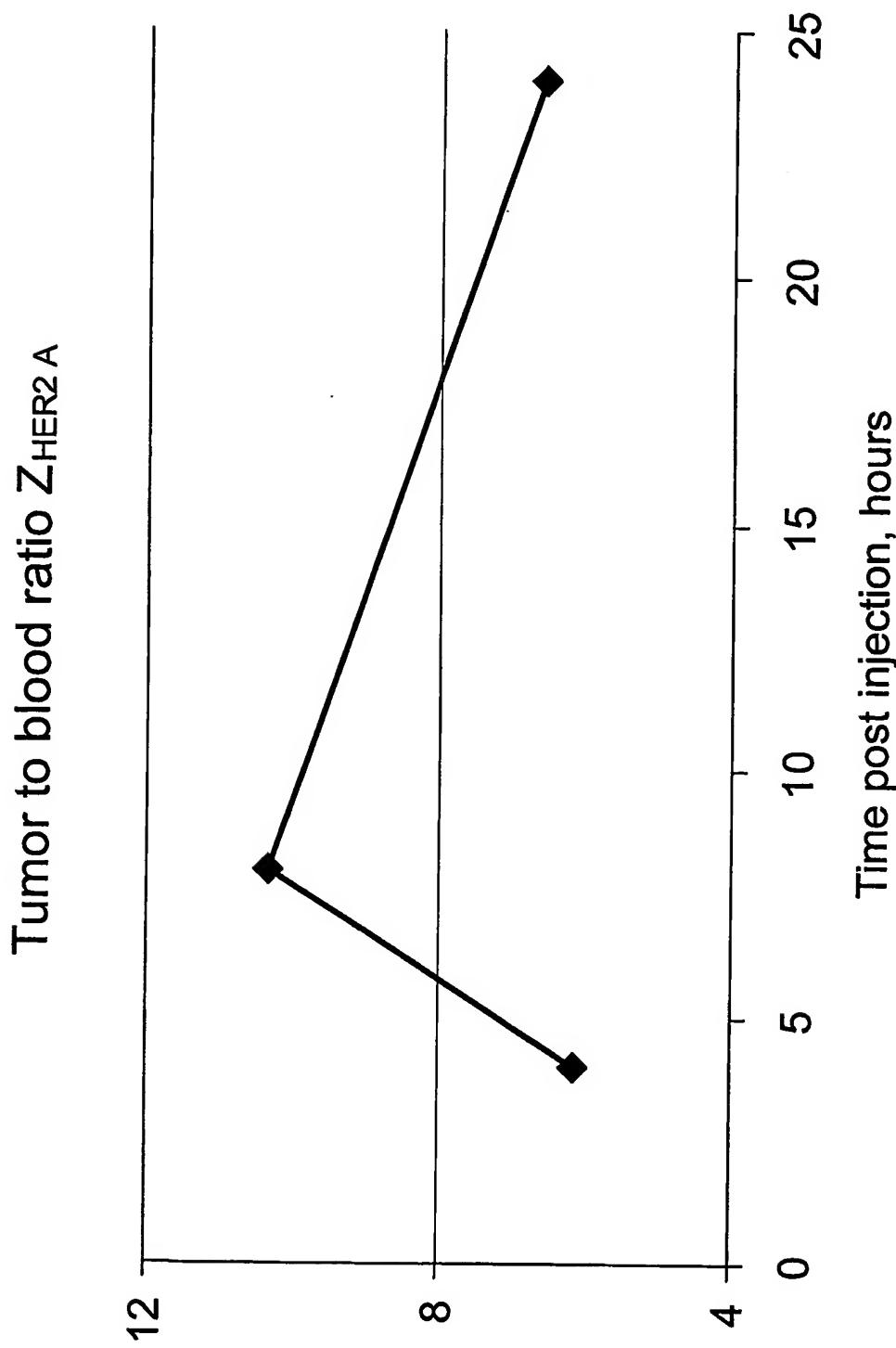


FIGURE 21

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FIGURE 22

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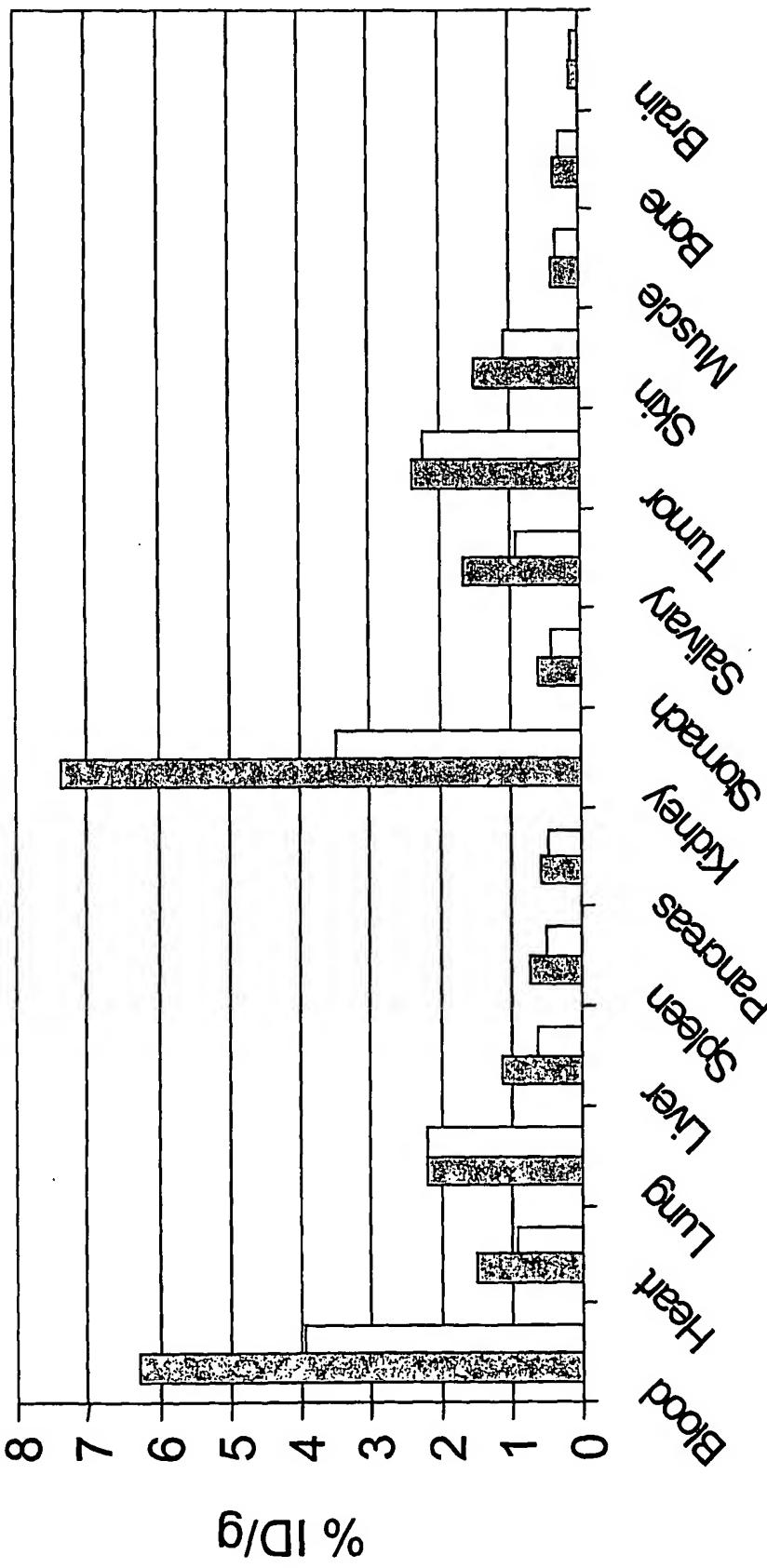
Biodistribution ABD(Z_{HER2 A})₂,12 and 24 hours

FIGURE 23

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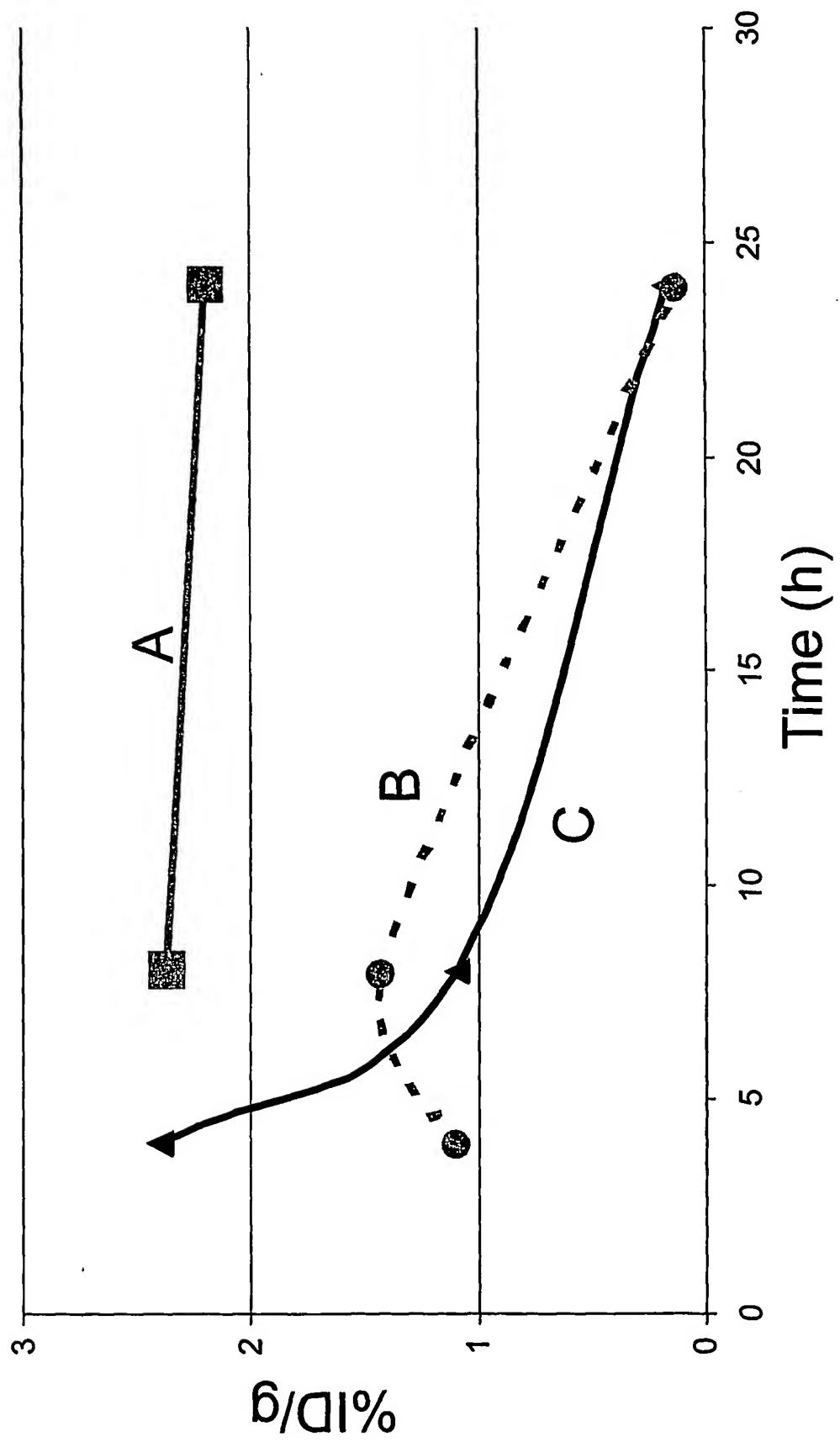
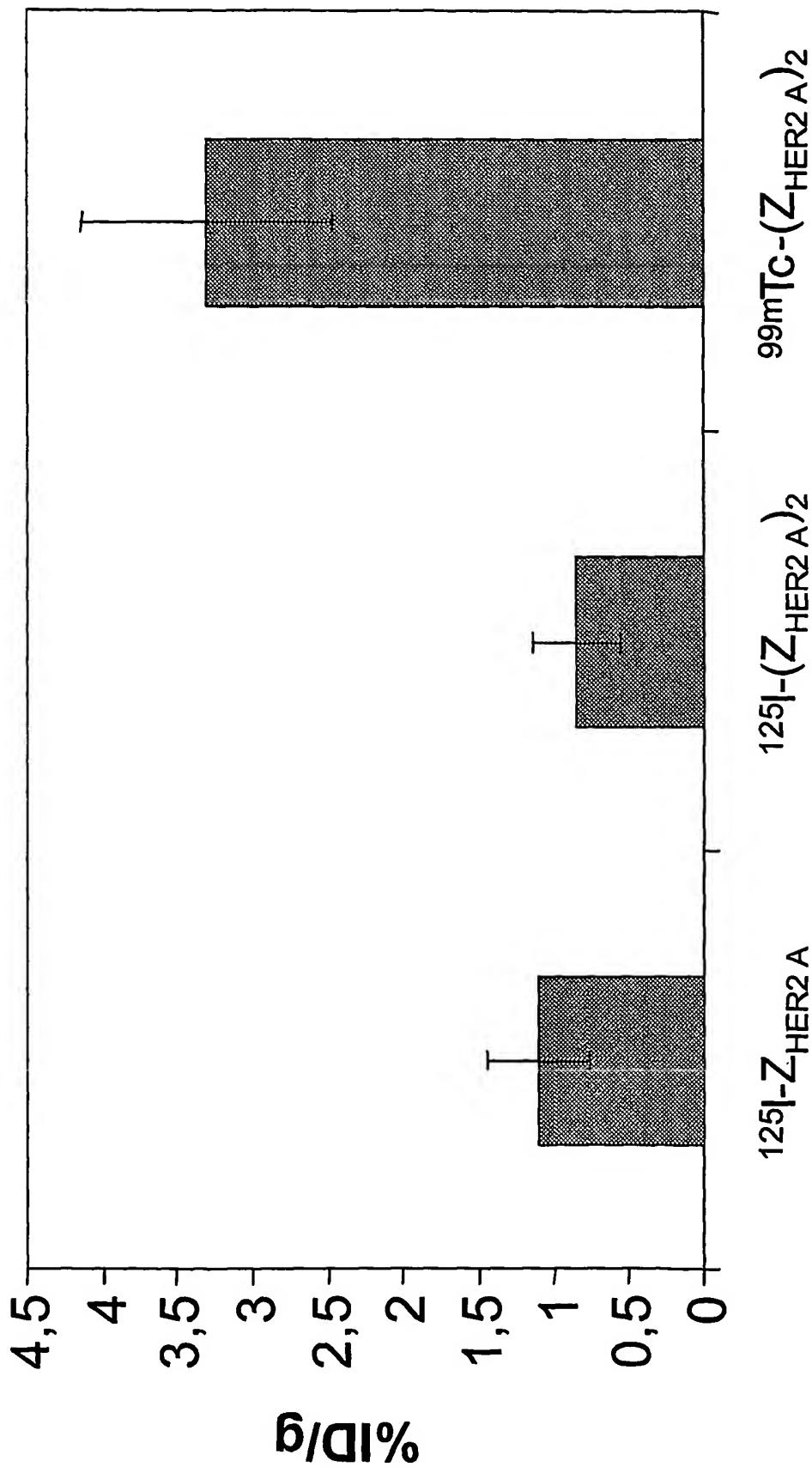


FIGURE 24

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Tumor uptake at 8 h pi**FIGURE 25**

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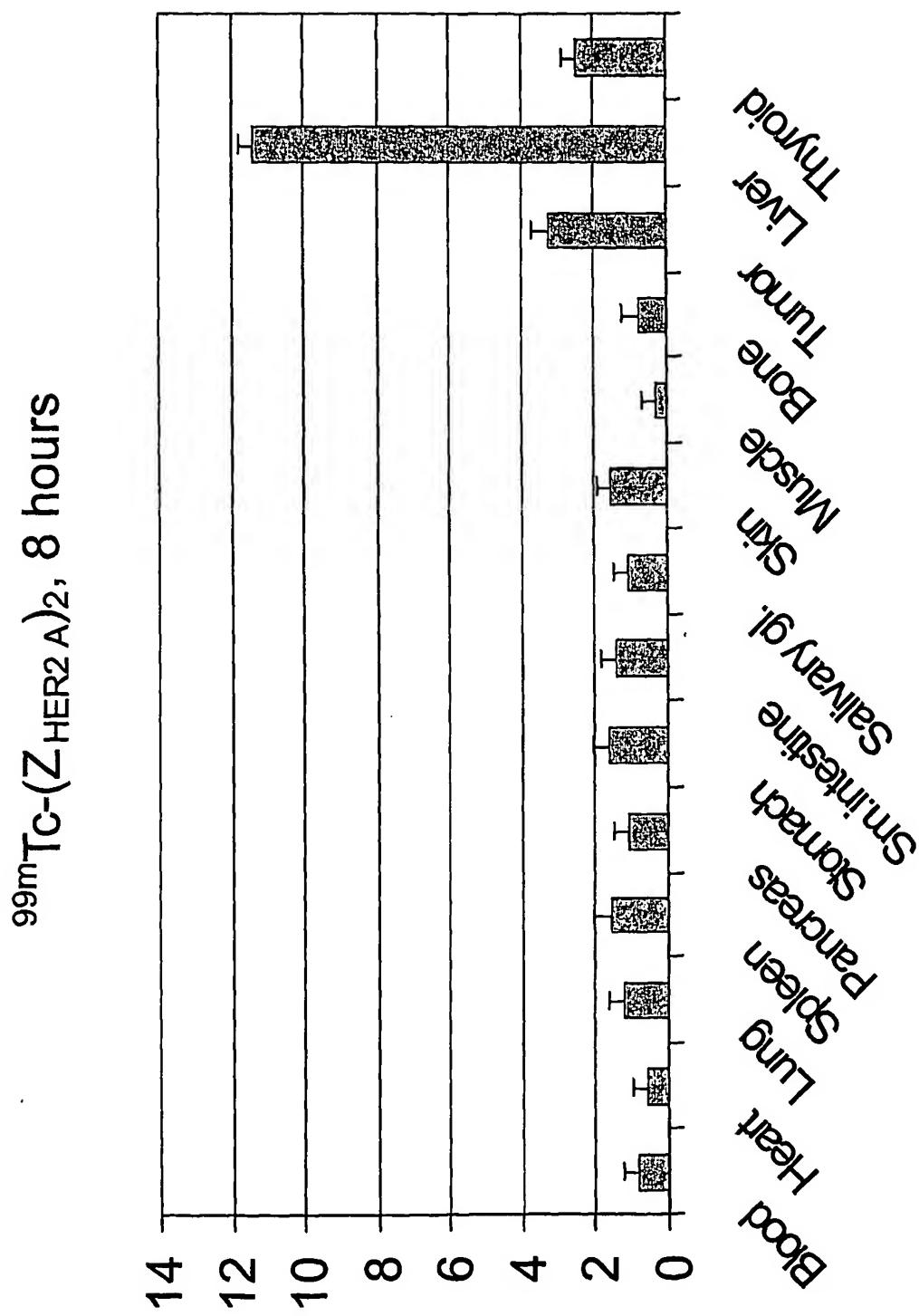


FIGURE 26

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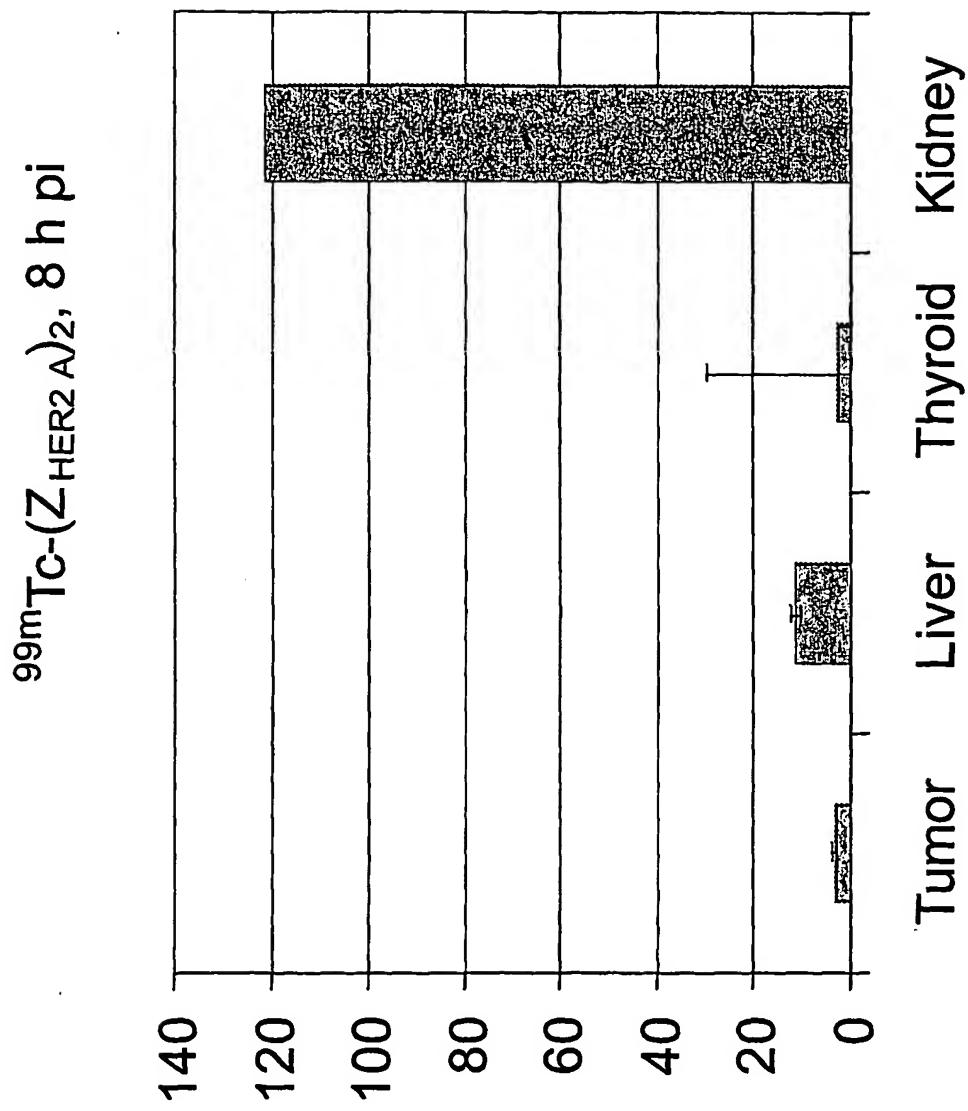


FIGURE 27

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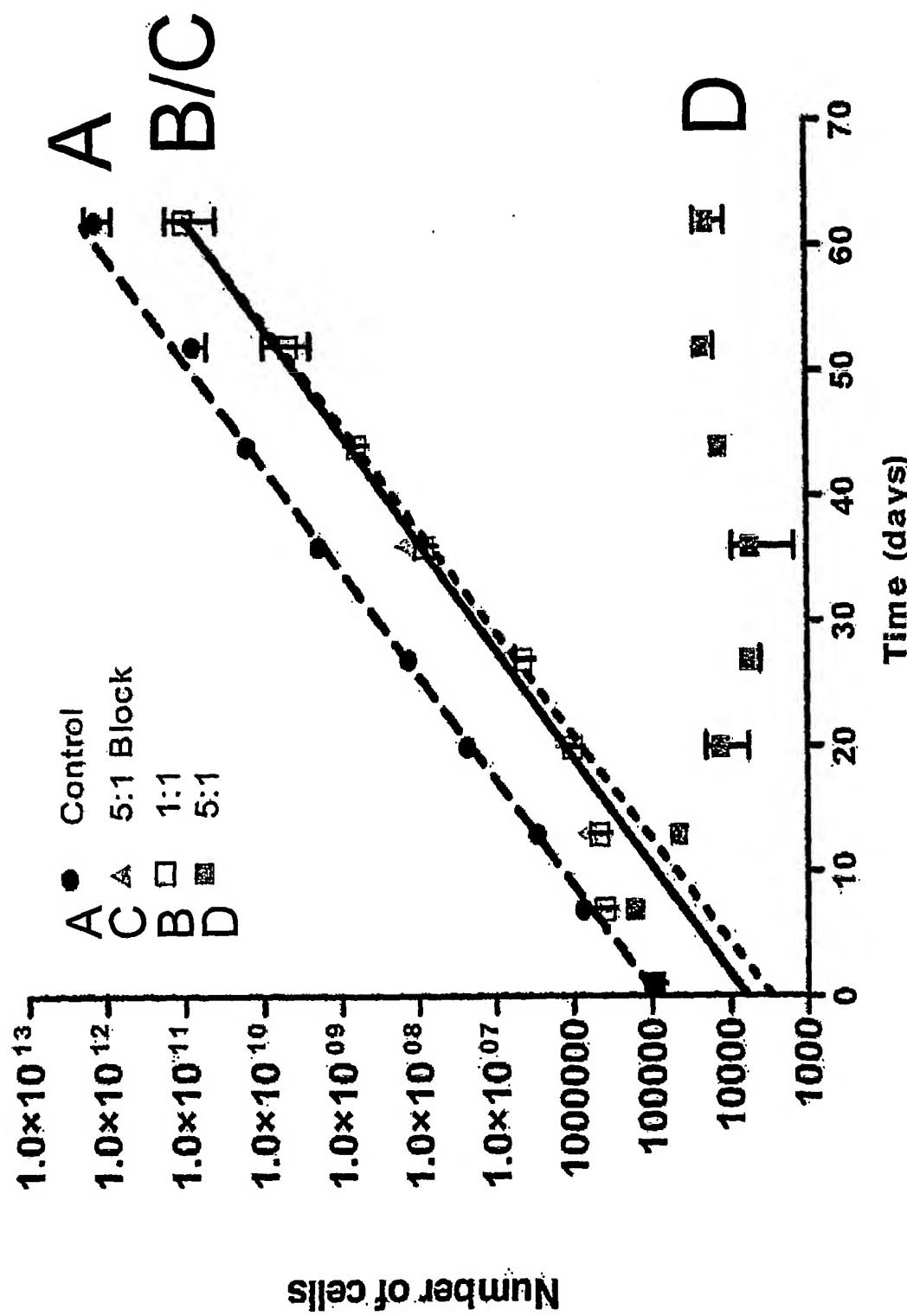


FIGURE 28

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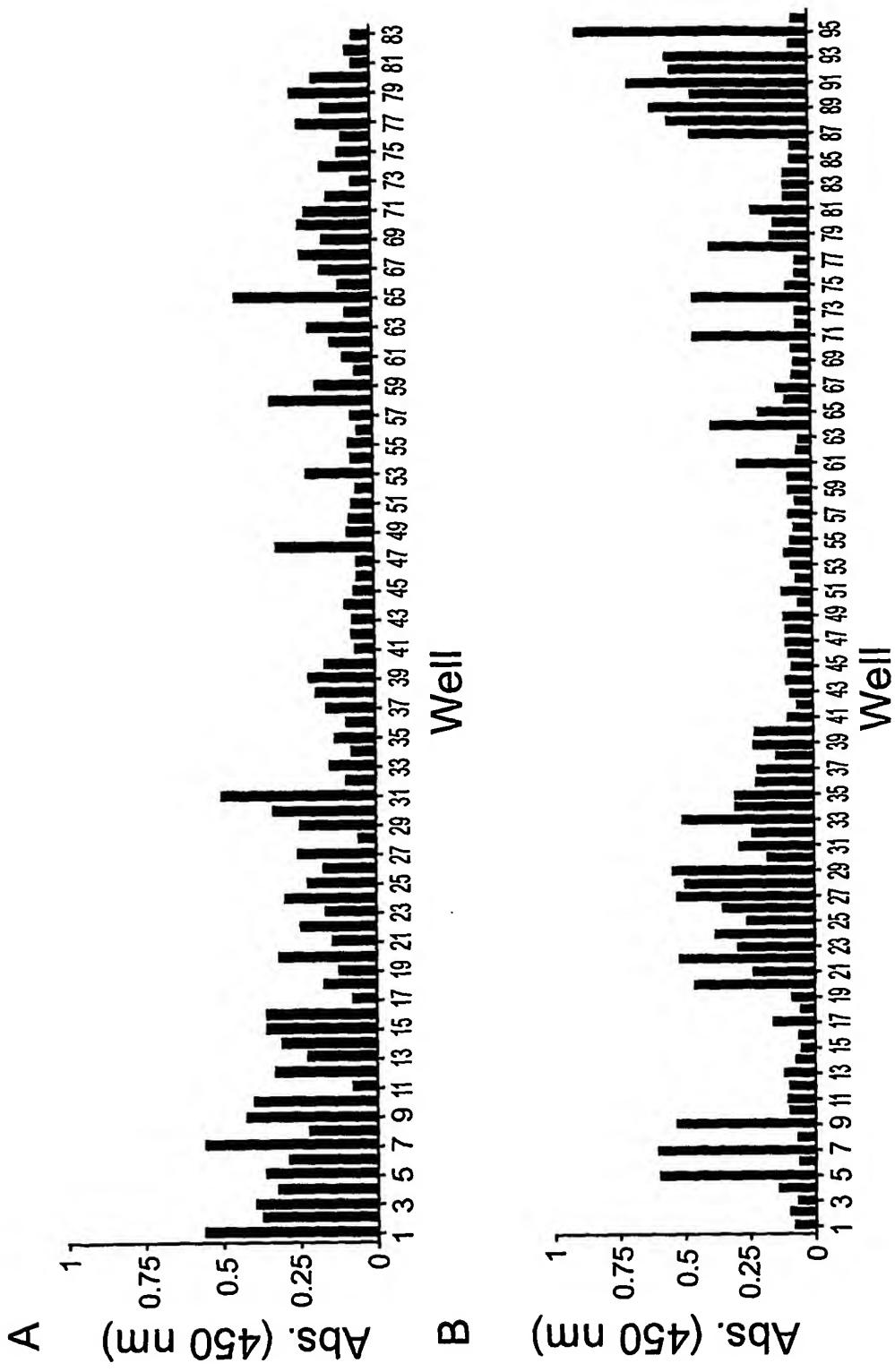


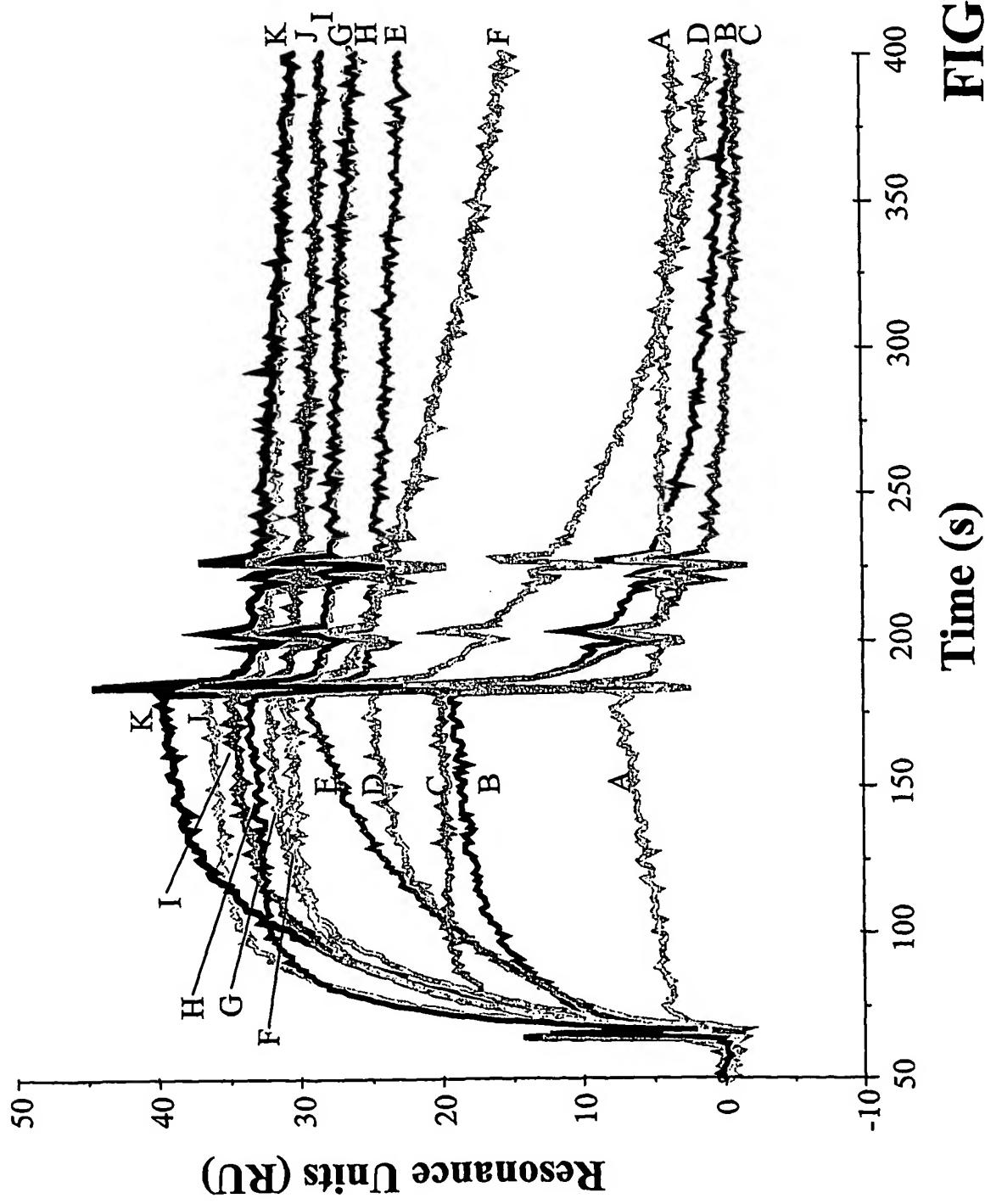
FIGURE 29

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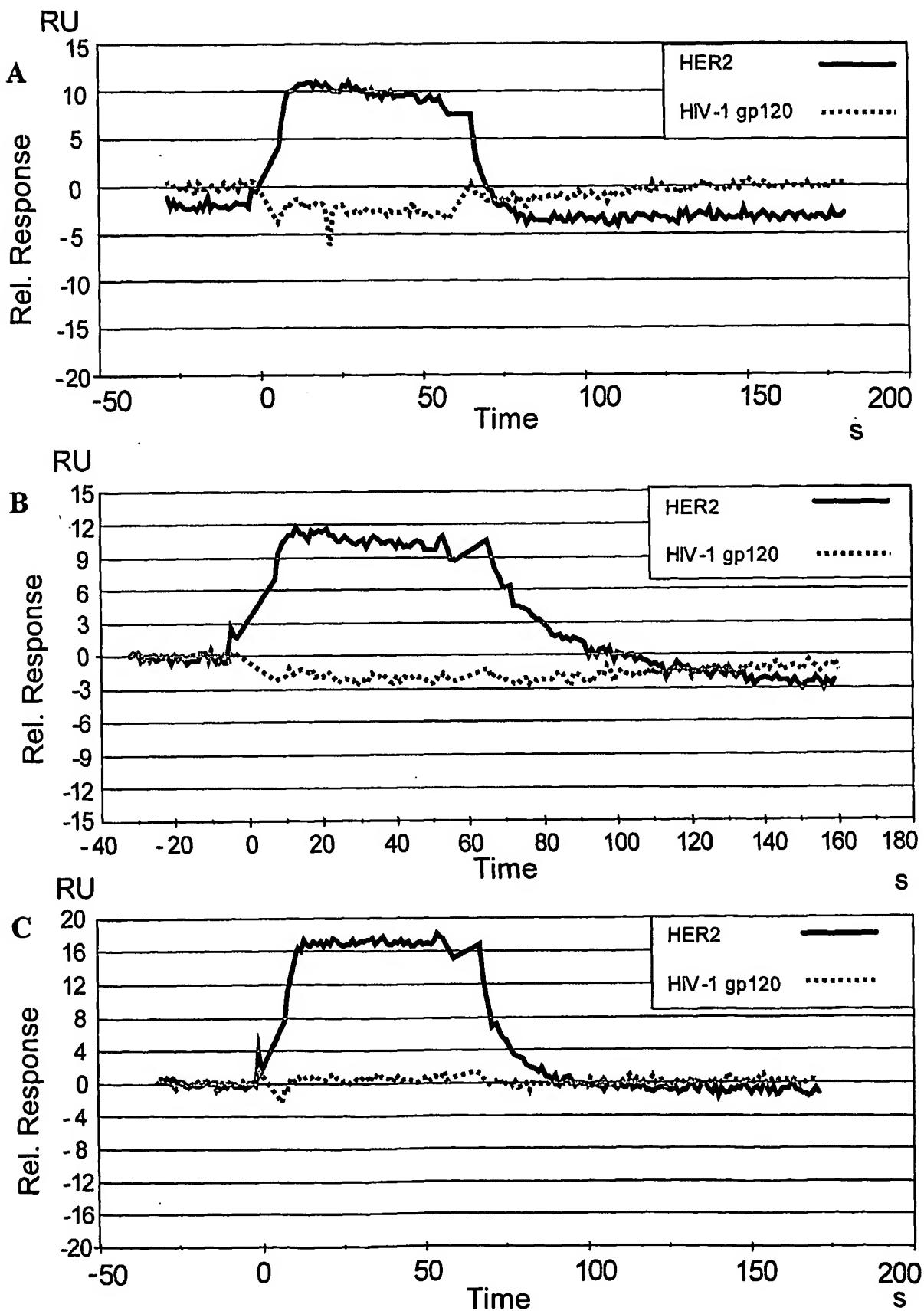


FIGURE 30

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FIGURE 32

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